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Basic Psychological Needs, the Mediators for Motivations in a Chinese University

Jingjue Yin

**Doctor of Education
School of Education
Durham University
2013**

Abstract

This interpretive case study examines Chinese undergraduates' self-determined and extrinsic motivations to participate in various university activities and academic courses. The study legitimates the application of Self-Determination Theory (Deci & Ryan, 1985; 2002) as a useful framework for studying the Chinese university context in showing that implied basic psychological needs for competence and relatedness can mediate such motivation in different ways, based on whether the university environment facilitates their satisfaction or not. Only when undergraduates are self-determined and interpret the university environment as autonomy-supportive do their implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivation. In such circumstances, students' participation in university activities and courses can help them achieve their expressed integrated goals, with associated experiences of positive affect. When undergraduates are self-determined but do not interpret the university environment as autonomy-supportive, their implied basic psychological needs for competence and relatedness cannot facilitate their self-determined and extrinsic motivation to participate in activities and courses that would enable them to accomplish their integrated goals. The study outlines the university environmental factors that students interpret as autonomy- or non-autonomy-supportive, in addition to their expectations of factors that should be autonomy-supportive. Given the impact of these factors on the satisfaction of students' implied basic psychological needs, self-determined and extrinsic motivation, and accomplishment of their integrated goals, the factors that students consider autonomy-supportive are areas where universities could, and should, enhance their provision.

**A Thesis Submitted in Partial Fulfillment for the Degree of
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2013**

Jingjue Yin

Title

**Basic Psychological Needs, the Mediators for Motivations in a Chinese
University**

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Abbreviations

BPN	Basic Psychological Needs
CET	Cognitive Evaluation Theory Chinese English Test
CCEE	Chinese College Entrance Examination
CIE	Chinese Imperial Examination
COT	Causality Orientation Theory
OIT	Organismic Integration Theory
PLOC	The Model of Perceived Locus of Causality
SDT	Self-Determination Theory
TFSU	Tianjin Foreign Studies University
TUCTM	Tianjin University of Chinese Traditional Medicine

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Declaration

No part of the material offered in this thesis has previously been submitted by me for a degree in this or in any other University.

The copyright of this thesis rests with the author. No quotation from it should be published without the author's prior written consent and information derived from it should be acknowledged.

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Chapter 1 Introduction

1.1 Primary Focus of the Study

While most motivational studies investigate the desired consequences of positive motivational development, Self-Determination Theory (SDT, Deci & Ryan, 1985; 2002) focuses on how these desired consequences come about and why these consequences are desired (Deci et al. 1991, p. 327; Deci & Ryan, 1985, p. 3). What energizes individuals is a matter of needs, and SDT postulates that internalization is dynamic and dependent upon social-contextual support as mediated by basic human psychological needs for competence, autonomy and relatedness (Ryan, 1995). In other words, the environment must satisfy these basic psychological needs in order to promote the process of internalization.

The study focuses on Chinese undergraduates' extrinsic and self-determined motivation to participate in various university activities or academic courses. It, provides a qualitative investigation of how the aforementioned basic psychological needs mediate the impact of environmental factors, such as information access and infrastructure, on this motivation. Previous work within the framework of SDT has investigated how basic psychological needs interact with either motivation *or* environmental factors, as illustrated in Figure 1 below. This study looks at how all three factors interact. The majority of studies on SDT are conducted quantitatively, and consist of researchers focusing on participants' motivation to accomplish specific

tasks or activities that the researchers themselves have provided. Providing a task or activity and then assessing self-determination is logically contradictory. However, study participants are seldom questioned qualitatively regarding the tasks and activities in which they already exercise their self-determined motivation through participation or expected participation. The limited qualitative study that exists has yet to determine the complex interactions between motivation, psychological needs, and environmental factors.

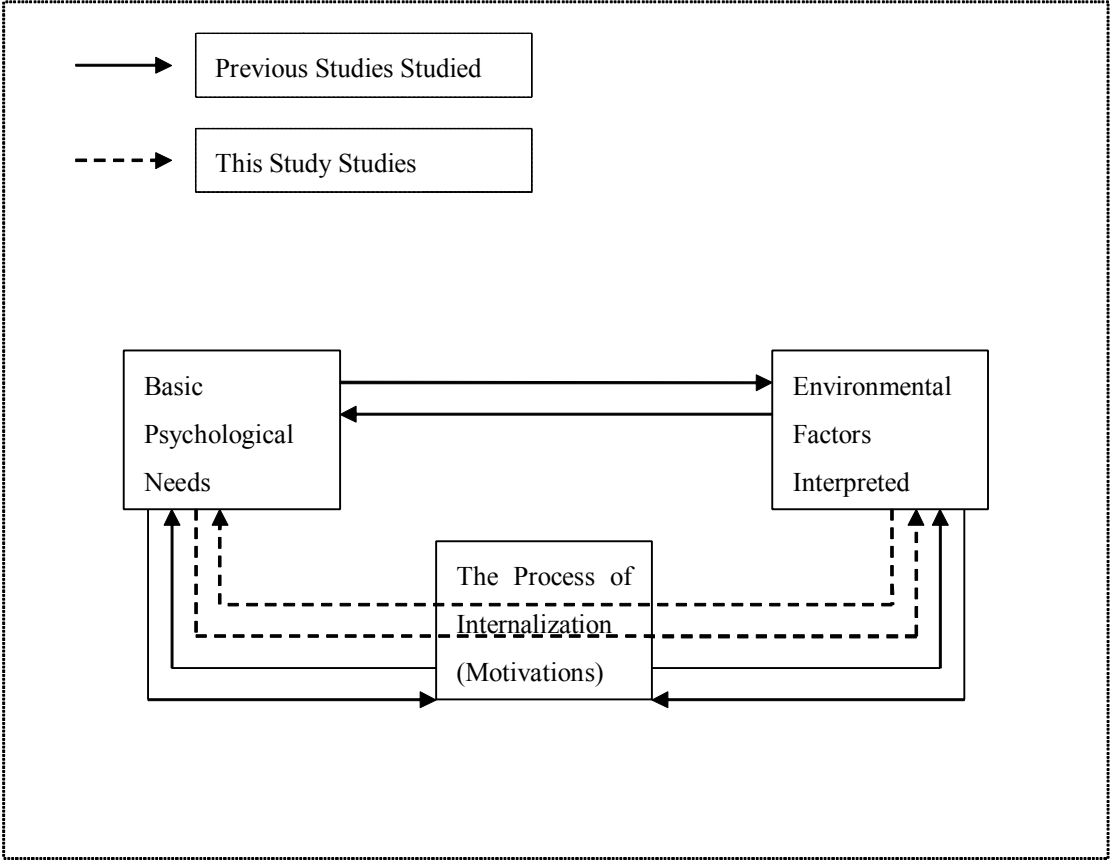


Figure 1 The Comparison between What Previous Studies Studied and What this Study Studies

This interpretive case study responds to these gaps in the current SDT literature. It employs semi-structured interviews to access Chinese undergraduates’

self-determined, extrinsic motivation to participate in particular university courses or activities. It examines the basic psychological needs implied by this participation or expected participation, and considers how these needs mediate the impact of the university environment on these students' motivation.

1.2 The Assumptions and the Arguments of this Study

The assumptions and arguments of this study are summarized here and are discussed in greater detail in the Literature Review. One of the assumptions of this study is that in line with SDT, Chinese undergraduates as the study participants are proactive organisms with an innate tendency toward personal growth. Their self-determined behaviours depend on the internalization of external regulators, such as deadlines and professors' expectations. Integral to the internalization process is how students' interdependent self-construal, within the collectivist context of their Chinese university education, interacts with their independent, individual self-construal. Within a hierarchical understanding of contextual to situated self-determined motivation, the second assumption of this study is that Chinese undergraduates' self-determined extrinsic *contextual* motivation to obtain a university education, which is embedded in a wider Chinese collectivist cultural context, impacts on their self-determined extrinsic *situated* motivations to pursue various university activities and academic courses. The third assumption of this study is that basic psychological needs facilitate Chinese undergraduates' process of internalization. Basic psychological needs initiate self-determined and extrinsic motivation to participate in various university activities or academic courses, thereby mediating the impact of

university environmental factors on these Chinese undergraduates' motivation.

The first argument of this study is that the implied basic psychological needs of competence and relatedness facilitate Chinese undergraduates' situated, self-determined extrinsic motivation to participate in various university activities or academic courses. However, this should only occur when the Chinese undergraduates are self-determined to accomplish their extrinsically motivated, integrated goals and when the university environment is interpreted as being autonomy-supportive. The second argument of this study is that when the university environment is not interpreted as being autonomy-supportive, the implied basic psychological needs for competence and relatedness will facilitate the Chinese undergraduates' situated, non-self-determined extrinsic motivations (i.e., situated external regulations or situated introjected regulations), rather than their situated, self-determined extrinsic motivation (i.e., identified regulations or integrated regulation).

1.3 Main Issues Discussed in the Study

Given that basic psychological needs facilitate or energize undergraduates' self-determined extrinsic motivation, in addition to mediating the impact of university environmental factors on this motivation, the first issue this study explores is *how* this mediation process occurs.

Another issue this study explores is the direction of undergraduates' self-determined motivation. The processes and structures of the organism give meaning to internal and

external stimuli, and direct action toward the satisfaction of needs (Deci & Ryan, 1985). This study focuses on the meanings that Chinese undergraduates give to internal and external stimuli rather than on the processes and structures of the organism which lead to need satisfaction. External stimuli are examined by exploring the students' integrated goals. These consist of generally desired outcomes that are adopted by the individual as personal goals, and thus internalized. For example, valuing the goal of being accepted or respected by others can be internalized and used to fuel self-determined extrinsic motivation to participate in the university courses and activities that might help fulfill this integrated goal. Basic psychological needs, as the internal stimuli, are inherently bound up in the meanings the students give to these external stimuli, and are thus implied rather than accessed directly.

1.4 Motivation to Participate in Various University Activities or Academic Courses

The basic psychological needs implied by the meanings students attribute to internal stimuli are thus based on the interconnected integrated goals, external stimuli, and wider cultural context. What Chinese undergraduates consider important for them to function effectively in Chinese society characterizes their integrated goals and thus requires unique consideration. These concerns are to some degree inherited from Chinese traditional culture, values and attitudes, and form a unique complex that can influence these students' motivation to attend university and engage in activities and courses.

China has been an official oriented country since ancient times (Li, 2008). In other words, Chinese people respect and are eager to become officials, in government or administrative positions, in order to pursue wealth, authority and social stature (Li, 2008). These factors are external indicators of success important to Chinese interdependent self-construal and can be internalized as personal integrated goals. Being able to work with intellect and one's brain, rather than as a labourer using their hands is a key aspect of obtaining these positions. Traditionally, schools train students to work with their minds, and when students have completed their education, they take the Chinese Imperial Examination. On the basis of their performance on this exam, a select group of such intellectuals is chosen to become officials. Historically, the examination process and the officials that rise through it have been highly respected. Today, Chinese people respect those who use their intellects even if they do not become officials, recognizing that intellectualism remains significant in gaining the culturally valued outcomes of wealth, authority and privileged social status.

The most important, acceptable and respected way of being able to work with one's intellect is through attending and graduating successfully from university. This is dependent on passing the Chinese College Entrance Examination. Chinese people who attend university obtain more opportunities to be employed in jobs where they can work with their intellects than those who have not attended university. Therefore, Chinese students are motivated to attend university in order to obtain this kind of work after graduation, and in doing so, gain the respect and acceptance of their society.

In one sense, the efforts expended by Chinese students to be able to work with their intellect following university represent their adherence to a larger Chinese complex.

This set of expectations for how to live one's life is inherited from Chinese culture and traditional values. This complex places Chinese students in a context of fierce employment competition that impacts on their motivation to attend university and to participate in a number of courses and activities once there. It requires students to aim for excellence in their academic studies, develop experience that will be valued in the workplace, and to improve their interpersonal skills. On an individual level, however, acknowledging that Chinese undergraduates are proactive organisms (Deci & Ryan, 1985; 2002) with independent selves from this complex, Chinese undergraduates are also motivated by personal development.

1.5 The Purpose of this Study

The purpose of this study is to examine the phenomenon of how Chinese undergraduates' basic psychological needs of competence and relatedness facilitate their motivation to participate in various university activities and academic courses by mediating the impact of university environmental factors on this motivation. The examination of this phenomenon is carried out in order to test and legitimate the arguments regarding the impact of autonomy supportive and non-supportive environments on self-determined, extrinsic motivation. This interpretive case study covers contextual conditions (i.e., interpreted autonomy-supportive environmental factors vs. interpreted none autonomy- supportive environmental factors), which are highly pertinent to phenomenon of this study (i.e., how basic psychological needs facilitate undergraduates' motivations to participate in academic courses or various activities) (Yin, 1994, p. 13).

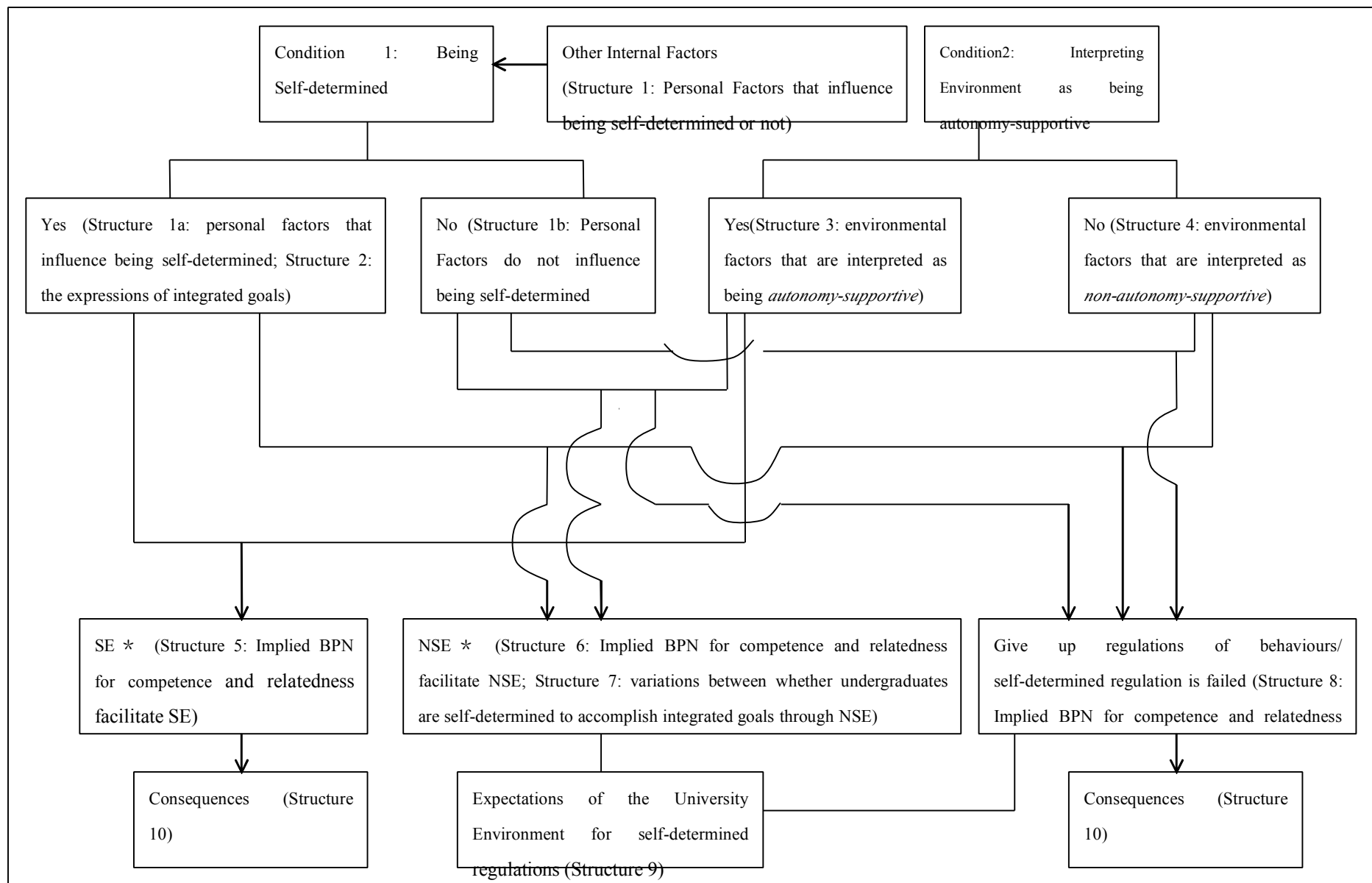
There are several outcomes that are expected to accompany the examination of this

phenomenon. Examining this phenomenon will provide descriptions of how Chinese undergraduates express their integrated goals. Additionally, it should provide descriptions of the mediation process between implied basic psychological needs and the impact of university environment factors on Chinese undergraduates' motivation, especially when these needs are theoretically proven to facilitate undergraduates' process of internalization. The structures of this phenomenon and the relationships among these structures are presented in Figure 2 below.

Figure 2 The Relationships among Different Structures within Self-Determined Theory

SE * : Self-determined Extrinsic Motivation

NSE * : Non-self-determined Extrinsic Motivation



1.6 Key Definitions

As this study examines how basic psychological needs facilitate or hinder Chinese university undergraduates' extrinsic and self-determined motivation, the definition of self-determination is significant. Being self-determined, according to Deci (Deci et al. 1989), means having a sense of choice in initiating and regulating one's own actions. Deci and Ryan (1985) elaborate:

Self-determination is a quality of human functioning that involves the experience of choice...self-determination is more than a capacity; it is also a need ...when self-determined, one acts out of choice rather than obligation or coercion, and those choices are based on an awareness of one's organismic needs [i.e., the needs of growth tendencies and basic psychological needs] and a flexible interpretation of external events [i.e., various activities or academic courses in this Chinese university].

(Deci & Ryan, 1985, p. 38)

People accept social values and norms (Ryan, 1995) by regulating their own actions towards being self-determined, and this forms part of their personal development. Erikson's (1968, p. 161) identity formation theory provides support for this claim, by arguing that regulating one's own actions differently is a dynamic process as the ego grows, and that it results in a coherent and well-integrated identity structure. A well integrated identity, resulting from internalization, shows greater autonomy and more effective functioning (e.g., Ryan et al. 1985). Erikson (1968) explained the

significance of a well-integrated identity structure:

A coherent, well-integrated identity structure provides a sense of purpose and direction, and it serves as the basis of effectively coping with and adapting to the demands and vicissitudes of daily life.

(Erikson, 1968, p. 159)

Being self-determined leads undergraduates to engage in beneficial behaviours, such as taking part in university activities and academic courses, that typically develop their competencies and fulfil their integrated goals of working toward a flexible accommodation with Chinese society upon graduation (e.g., preparing to work competitively and with intellects) (Deci & Ryan, 1985, p. 38).

1.7 Research Questions of this Study

1. What are the integrated goals Chinese university undergraduates possess for their self-determined and extrinsically motivated participation in various university activities or academic courses?
2. How do implied basic psychological needs of competence and relatedness mediate the impact of university environmental factors on Chinese undergraduates' self-determined and extrinsic motivation to engage in various university activities or academic courses?

3. If the university environment is not interpreted as being autonomy-supportive by the Chinese university undergraduates, how do implied basic psychological needs of competence and relatedness facilitate these undergraduates' process of internalization in their activity and course participation?

Chapter 2 Literature Review

2.1 Motivational Studies

2.1.1 The Nature of Motivational Studies

The study of motivation entails the consideration of an individual's nature and how specific factors particular to that individual influence their motivation to act (Deci & Ryan, 1985, p. 3). People can be motivated by various drives according to Drive Theory (e.g., Freud, 1917; Hull, 1943). For example, Freud (1914, 1915, 1917) argues that sex and aggression are the two important drives behind human behaviour. Hull (1943) argues that people are influenced by four drives to act: hunger, thirst, sex and the avoidance of pain.

However, complex behaviour often cannot be easily explained by drive theories (Deci & Ryan, 1985, p. 4). People are motivated to act differently either directly or indirectly when facing external factors or stimuli. For example, in cognitive psychology, Pavlov, the Russian physiologist, explored animal reactions to indirect stimuli, in a process known as conditioning (Dembo, 1994). Pavlov's experiment involved food, a dog and a bell (Dembo, 1994). Before conditioning, there was no response from the dog when ringing the bell. Placing food in front of the dog initiated the dog's salivation. During conditioning, the bell was rung a few seconds before the dog was presented with food. After conditioning, the ringing of the bell alone produced salivation (Dembo, 1994). Pavlov rang the bell each time he fed the dog

thereby reinforcing the link between the dog's salivation (the behaviour) and the ringing of the bell (the external stimulus). Bandura (1977) suggested a different explanation for the dog's behaviour. Bandura (1977) argued that Pavlov's reinforcement process only provided an explanation for the regulation of the dog's immediate behaviour (e.g., the bell ringing stimulated salivation). It ignored the conscious involvement of the dog (e.g., the food stimulated salivation) (Bandura, 1977, p. 192). Bandura (1977) emphasized that explanations for behaviour require consideration of conscious involvement in how external stimuli are processed. Conscious involvement is integral to contingency learning. From the perspectives of cognitive behaviourists, human behaviour relies heavily on the cognitive processes activated by direct stimulations from the outside environment. Though they acknowledge the important effects of direct stimulation from the external environment on behaviour, cognitive behaviourists focus mainly on the different aspects and mechanisms of cognitive processes.

Unlike most cognitive psychologists or cognitive behaviourists, Skinner's (1948; 1953) stimulus-response pattern of conditioned behaviour ignored the cognitive process. Skinner (1977) commented on Pavlov's experiment: "The standard mentalistic explanation is that not the dog associates the bell with the food. But it was Pavlov who associated them!" Skinner (1948) presented the concept of "operant conditioning", which means the learner reacts to the environment and receives a reward for certain behavioural reactions and not others. In terms of Pavlov's experiment, the dog was motivated by the food not the bell ringing. If learners are motivated to learn for a reward they expect to obtain, or if reinforcers imply a reward, the learner will behave in the same way (e.g., food is reinforcing to a hungry organism, cited in Skinner 1957). Eventually the association between behaviour and the

environment is established according to Skinner's "operant conditioning" (Good & Brophy, 1990).

Later psychologists (e.g., Deci & Ryan, 1985; 2002) working within the framework of empirical psychology (e.g., Skinner, 1948; 1957; 1977) have addressed this interaction between external stimuli and internal factors by studying the energization and direction of behaviour (Deci & Ryan, 1985, p. 7) with respect to the satisfaction of basic psychological needs. Self-Determination Theory (SDT, Deci & Ryan, 1985; 2002) provides a framework for addressing the question of what energizes people's motivation to act. SDT, an organismic motivational theory, is based on the assumption that human beings actively attempt to master external forces in the environment on the basis of their organismic needs and integrated goals in order to function effectively and achieve flexible accommodation within the social environment (Deci & Ryan, 1985, p. 8, 38, 129).

2.1.2 Self-Determination Theory

Self-Determination Theory (SDT) is concerned with how humans are motivated towards the satisfaction of their basic psychological needs through the integration of internalized environmental forces with inner drives and emotions (Deci & Ryan, 1985, p. 8). The motivation to satisfy these needs contributes towards growth for effective functioning in the social world (Ryan & Deci, 2000). SDT studies explore how environmental or personal factors facilitate the satisfaction of basic psychological needs and promote personal growth (Ryan & Deci, 2000). In SDT, the basic psychological needs of competence, relatedness and self-determination are theorized

as mediating the impact of social factors on motivation (Deci & Ryan, 2002, p. 48). In other words, instead of a direct line between social factors (external stimuli) and behaviour, according to SDT, external social factors can facilitate the satisfaction of basic psychological needs and thereby occasion a more complex, self-determined motivation for behaviour. In this way, SDT focuses on the relationship between self-determined behavior, representing active, growth-oriented human organisms, and social contexts that either support or undermine individuals' attempts to master and integrate their experiences into a coherent sense of self (Deci & Ryan, 2002, p. 27).

According to SDT, autonomy-supportive environmental factors and non-autonomy-supportive environmental factors impact individuals' motivation differently by satisfying basic psychological needs differently. For example, environmental factors that support autonomy can facilitate the satisfaction of basic psychological needs and thus facilitate self-determined motivation, whereas environmental factors that do not support autonomy result in non-self-determined motivation or amotivation (see Deci & Ryan, 1985; 2002). The meanings of autonomy-supportive or non-autonomy-supportive environmental factors are presented and explored in this study. These meanings may be presented as positive or negative according to the experiences and perspectives of the study participants. In other words, environmental factors within the participants' university setting are categorized as supporting or undermining autonomy through the analysis of their stories.

This interpretive case study relies on the framework of SDT for two main reasons. Firstly, while most motivational studies investigate the desired outcome of motivational development, SDT actually focuses on how this development comes about and why it is desired (Deci & Ryan, 1985, p. 3). In other words, while most

motivational studies investigate the desired outcome of motivation, SDT focuses on how certain types of motivation actually develop and why they are desired. Because the study of how needs may be satisfied can provide suggestions or recommendations about how to develop motivation, the use of SDT enables more penetrating psychological exploration of motivation development. Secondly, because it considers the impact of environmental factors on motivation, SDT matches the critical realist perspective instructing this interpretive case study. Critical realism emphasizes how individuals make meaning of their experiences, the ways their broader social context impinges on these meanings, and also the material and other limits of “reality” (Braun & Clarke, 2006, p.81). Using a case study approach provides the opportunity to explore contextual conditions that may be pertinent to the phenomenon under study (Yin, 1994, p. 13). The theoretical framework of SDT, critical realist epistemology and case study methodology all consider the impacts of environmental or contextual factors. In other words, SDT supports the critical perspective with which the researcher perceives individuals’ experiences.

SDT consists of Cognitive Evaluation Theory (CET), Organismic Integration Theory (OIT) and Causality Orientation Theory (COT) (Deci & Ryan, 1985; 2002). CET was proposed by Deci (1975) to integrate early empirical findings regarding the effects of external and internal events on individuals’ intrinsic motivation (Deci & Ryan, 1985, p. 62). OIT was developed based on the consideration of people as organisms who actively seek to satisfy their basic psychological needs and accomplish their integrated goals by internalizing external forces (for more details, see Deci & Ryan, 1985). OIT studies justify or develop theories regarding the development of internalization and how this process is facilitated by individuals’ basic psychological needs, which are in turn supported by the environment. In other words, OIT focuses

on which environmental factors facilitate the satisfaction of basic psychological needs, how this takes place, and how both environmental factors and basic psychological needs influence the overall internalization process. Studies within the framework of COT focus on whether people are oriented in such a way that they are likely to seek out, create, and interpret events as informational, controlling or amotivating (Deci & Ryan, 1985, p. 152). COT emphasizes individuals' internal power and investigates those factors that precipitate the development of internalization towards being self-determined. For example, people characterized by an autonomy orientation tend to seek out opportunities to be autonomous. In certain situations, the environment provides informational events that can be interpreted as autonomy-supportive and thus initiate action on the part of autonomy-oriented individuals (Deci & Ryan, 1985, p. 157).

2.2 Aims of this Study

Social contexts can support the satisfaction of basic psychological needs differently at global, contextual, and situational levels of motivation (Vallerand, 1997; Quay et al. 2003). Because this study examines the mediating role of basic psychological needs on self-determined, extrinsic motivation to participate in particular university courses and activities, its focus is on how the university environment satisfies needs on a situational level.

Motivation existing at the aforementioned three levels of generality differs with respect to intrinsic motivation, extrinsic motivation and amotivation (Deci & Ryan,

2002). Global motivation refers to an individual's general motivational orientation, while contextual motivation describes individuals' motivation in a specific sphere of activity, such as in interpersonal relationships, education, work, religion, and others (Quay et al. 2003; 2000). Situational (situated) motivation is towards a given activity at a specific point in time (Quay et al. 2003; 2000), and can be described as a "here and now motivation" (Vallerand, 1997). Within the hierarchical model of SDT, different levels of motivation have different stability (Quay et al. 2003). Global motivation is expected to be more stable than contextual motivation and contextual motivation is more stable than situational motivation. Logically, situational motivation is most easily affected by the environmental context (Quay et al. 2003, p. 993). Social factors define motivation at each level, and the impact of these factors is mediated by the basic psychological needs of competence, relatedness and autonomy (Deci & Ryan, 2002, p. 48). In addition, SDT posits that motivation at a given level is also influenced by top down effects of motivation at the proximal level higher in the hierarchy. For example, global motivation should have a stronger impact on contextual motivation than on situational motivation, and contextual motivation has a stronger impact on situational motivation (Vallerand, 1997; Deci & Ryan, 2002, p. 50).

Most SDT studies that measure contextual or situated motivation, for example by testing the top-down effects of contextual on situated motivation, examining the environmental factors that affect motivation at each level, or by investigating the mediating role of basic psychological needs on motivation development are conducted quantitatively.

In terms of measuring situated motivations and examining the environmental factors

which affect motivation, for example, Guay (Guay et al. 2000) has conducted five studies to develop and validate a situated measure of intrinsic and extrinsic motivation, the Situated Motivation Scale. The results of the fifth study (Guay et al. 2000) show that controlling, rather than autonomy-supportive, environmental factors decrease situated self-determined motivation. Another example of a quantitative study illustrating the effects of the environment on situated motivation is that of Adler (Adler et al. 2009), who found that when high task identification, variety, significance, autonomy and frequent performance feedback were present in a classroom setting, these fostered enhanced situated motivation and performance benefits for academic learning.

Researching the top-down effect of contextual on situational (situated) motivation, Ntoumains and Blaymires (2003) measured students' contextual and situated motivations in a PE class and a science class. They administered the Academic Motivation Scale (Ryan & Connell, 1989; Vallerand et al. 1992) and the Situated Motivation Scale (Quay et al. 2000) to 102 12- to 14-year-old British pupils, hypothesizing that situational motivation for a specific activity should be influenced mainly by their contextual motivation towards this activity, and not so much by contextual motivation towards a non-related activity. Ntourmains and Blaymires (2003) found that situational motivation in PE was significantly predicted solely by contextual motivation in PE and not by contextual motivation towards their science classroom-based education. Similarly, situational motivation towards the students' science lesson was significantly predicted only by contextual motivation towards classroom-based education and not by contextual motivation towards PE. Ntourmains and Blaymires's (2003) study thus provides evidence that only relevant contextual motivations influence situational motivation. These researchers considered motivation

at school a complex multidimensional construct, as participants interpreted motivational relevance separately, according to specific situations. Therefore the motivational context, for example for either PE *or* science, should be treated independently (Ntourmains and Blaymires, 2003, p. 15). Importantly, however, students' interpretations of "motivational relevance" in Ntourmains and Blaymire's study (2003) only address the motivational aspects that influence situated motivational behaviours. Their interpretations do not extend to questions of whether or how these motivational aspects are associated with or energized by basic psychological needs.

One example of a study examining how basic psychological needs promote motivations, which is presented as the intention of drop out of school, is that of Vallerand (Vallerand et al. 1997). They administered the Perceived School Competence Scale, the Perceived School Autonomy Scale and the Academic Motivation Scale in order to test a motivational model of high school dropout. They (Vallerand et al. 1997) find that low levels of self-determined motivation due to the experience of low competence and limited autonomy, which are the two basic psychological needs, leads students to develop the intention to drop out of high school. However, measurements of students' perceptions of competence and autonomy cannot tell us in which situations these students feel competent or autonomous. In addition, they do not clearly show which social factors are mediated by basic psychological needs or how these students express their feelings of competence or autonomy in that situation or domain. These measures therefore do not provide practical information on how to create situations that might foster students' feelings of competence or self-determination.

Methodology is decided based on how well an approach can answer the research questions posed. In this study, the use of a qualitative approach is supported by the shortcomings that previously utilized quantitative approaches present. A quantitative investigation using the framework of SDT can only provide statistical information about the correlational relationships among variables. It can only indicate to the reader that implied basic psychological needs do or do not facilitate internalization processes, whereas qualitative approaches can tell the reader the story of *how* and with what effects. A qualitative approach is able to discern the salient environmental factors in a particular situation, show how these foster the satisfaction of participants' implied basic psychological needs, and indicate how this then facilitates the process of internalization.

Quantitative and qualitative approaches differ in terms of their causal explanations for an outcome. In previously utilized quantitative approaches, determining causation has relied on correlations using probability or statistical theory. A qualitative approach, however, explains an outcome in terms of particular cases, using mathematical logic to analyze necessary and sufficient causes (Mahoney & Goertz, 2006, p. 229). For qualitative researchers, causation can be understood in terms of a necessary condition counterfactual: if X, then Y. X is a cause of Y because without X, Y would not have occurred (Mahoney & Goertz, 2006, p. 232). As such, the conditions producing the outcome are made apparent. Figure 3 illustrates a comparison between this mathematical logic and the logic of this study.

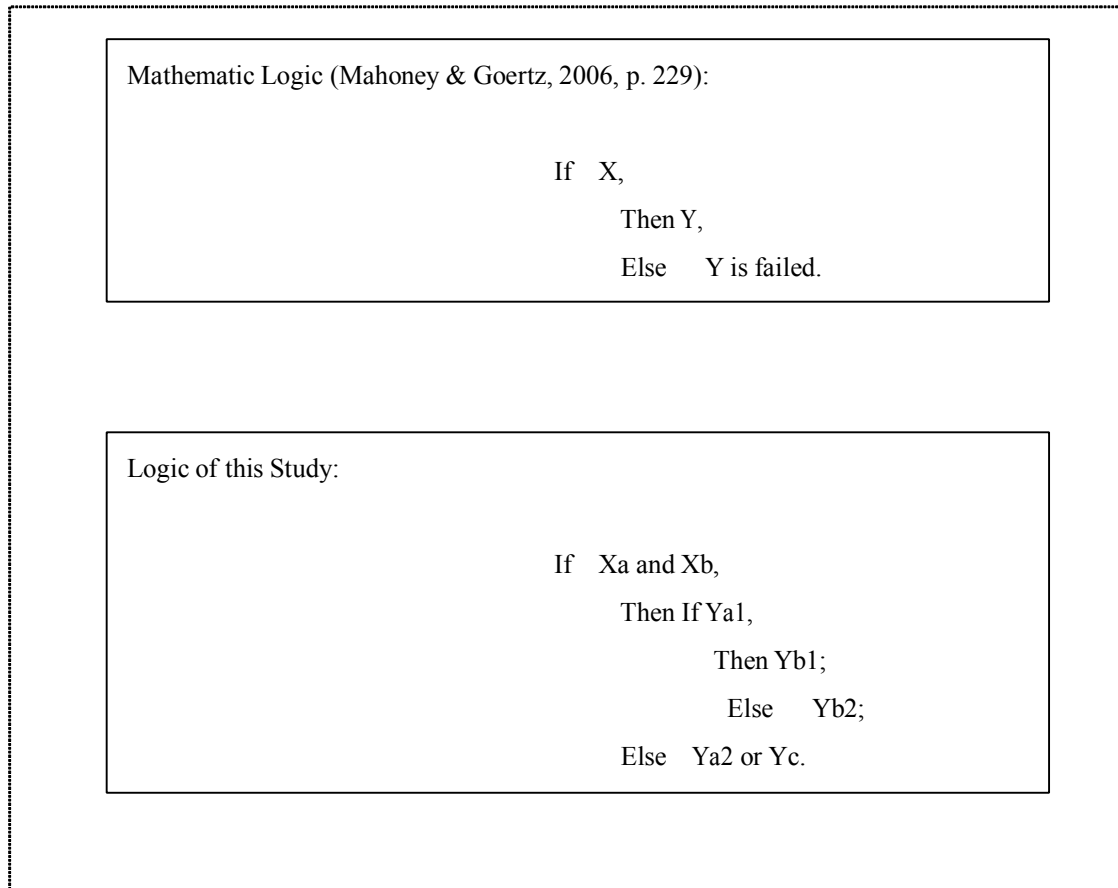


Figure 3 The Comparison between Mathematic Logic and Logic of this Study

In this study, the outcome is that Chinese undergraduates' implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivations to participate in various university activities and academic courses. This was found to be reliant upon two necessary conditions: interpreting the environment as autonomy-supportive (Xa) and being self-determined to accomplish one's integrated goals (Xb). If these necessary conditions are met, then the undergraduate's basic psychological needs are satisfied (Ya1) and their self-determined and extrinsically motivated participation in various university activities and academic courses is facilitated (Yb1). If these necessary conditions are unmet, then the

undergraduate's basic psychological needs, which facilitate self-determined extrinsic motivations, are not satisfied (Ya2). Then implied basic psychological needs facilitate non-self-determined extrinsic motivations (Yb2) or undergraduates quit their behaviour regulations (Yc). Therefore, using a qualitative approach can and has provided a more nuanced and meaningful explanation of the outcome.

A qualitative approach is also used in this study because the arguments within the framework of SDT are understood in line with critical realism (see more details in Section 3.1 Research Rationale). Critical realism emphasizes how individuals make meaning of their experiences, the ways the broader social context impinges on these meanings, and also the material and other limits of “reality” (Braun & Clarke, 2006). In this study, the outcome, Chinese undergraduates' implied basic psychological needs for competence and relatedness facilitating their self-determined and extrinsic motivation to participate in university activities and academic courses, is conceptualized in critical realist terms because it is perceived as a complex interaction between two aspects. One is an internal aspect, whether these undergraduates are self-determined to accomplish their integrated goals or not. The other aspect is external, and concerns whether the university environment is interpreted as autonomy-supportive. Both the environmental factors of the university context and students' individual self-determination are acknowledged as potentially impacting on students' process of internalization. Both aspects are also influenced by the wider Chinese social context. Studying these undergraduates' self-determined and extrinsic motivations must therefore be done with careful consideration of their context, and how it configures their motivation. The use of interpretive case study best answers the questions guiding this research due to its ability to highlight how Chinese undergraduates make meaning of their experience of participating in various

university activities and academic courses and the ways the wider Chinese social context impacts on and influences these meanings. Case study provides the researcher the opportunities to cover contextual conditions (i.e., interpreted autonomy-supportive environmental factors vs, interpreted none autonomy- supportive environmental factors in this Chinese university), which might be highly pertinent to the phenomenon of study (i.e., how basic psychological needs facilitate motivations in this study) (Yin, 1994, p.13).

The limited qualitative studies within the framework of SDT rarely address the question of how basic psychological needs mediate the impact of social factors on situated motivation. Dawes and Larson (2011) used a grounded theory approach to explore self-determined behaviour in 100 ethnically diverse youths (aged 14–21) who participated in 10 urban and rural arts and leadership programs. The researchers were interested in investigating how these youths progressively integrated personal goals with the goals of program activities. The researchers were especially interested in examining how the activities fostered an “authentic connection” (Dawes & Larson, 2011) even though the youth were extrinsically motivated to engage with the programs. The “authentic connections” were interpreted as the integrated goals that students were expected to associate with the program goals. However, again, the study did not analyze the “authentic connections” in terms of what may have energized them (i.e., basic psychological needs). Griffin (2006) provides an example of another qualitative study within the framework of SDT, in which it was suggested that both internal and external resources are associated with black high-achievers’ motivation for academic performance and achievement. Field (Field et al. 2003) makes similar comments on a study carried out by Sarver (2000 cited in Field et al. 2003), suggesting that both environmental factors and personality characteristics are

important to the success of postsecondary students with learning disabilities. Field (Field et al. 2003, p. 341) argues that the self-determination support provided in postsecondary settings for students with learning disabilities is strongly influenced by environmental factors, including institutional infrastructure, information access, availability of social support systems, and accessibility of faculty. The personality characteristics characterized as important for the development of self-determination include autonomy, problem solving abilities and personal persistence. Even though Sarver (2000 cited in Field et al. 2003) considers both environmental and personal factors as strong direct influences on these students' self-determination, and indirect influences on their motivation, Sarver's (2000 cited in Field et al. 2003) study does not delve into how these students' basic psychological needs mediate the impact of environmental factors on their motivation, according to the framework of SDT.

This study qualitatively examines Chinese undergraduates' extrinsic, self-determined motivation to participate in various activities or academic courses within the context of a Chinese university. From this, it extracts implied basic psychological needs, examining both how these are satisfied, and how they energize the undergraduates' extrinsic self-determined motivation. This study also examines the situatedness of these basic psychological needs, exploring the environmental factors which support or impede them, as well as the personal factors that influence Chinese undergraduates' self-determined motivation. In the Chinese context, students' motivation to attend higher education is self-determined, although also extrinsic to some degree, culturally and historically, as the Chinese individual can be characterized as a proactive, independent and interdependent self (for more details, see continued Literature Review).

The study examines how basic psychological needs mediate the impacts of environmental factors on *situated* motivation in particular because situated motivation is the most instable motivation in terms of levels of generality (i.e., in comparison to contextual and global motivation). Situated motivation is thus the most easily influenced by environmental factors (Quay et al. 2003, p. 993). The study therefore aims to determine which environmental factors provide this instability and most easily influence self-determined, extrinsic, situated motivation in a Chinese university context. Studying situated motivation requires that basic psychological needs are also studied on a situated level, as these needs energize self-determined, extrinsic motivation. Thus, the study looks both at how situated basic psychological needs energize self-determined, extrinsic, situated motivation, but also how they mediate the impacts of environmental factors on this situated motivation. Overall, how basic psychological needs are implied by Chinese undergraduates' expressions of their self-determined and extrinsic motivation to participate in various university activities or academic courses is significant in examining the role of their basic psychological needs.

Although the current study employs SDT as its theoretical framework mainly because SDT takes into account contextual and environmental factors in explaining the development of motivation, another reason for its use is that SDT construes basic psychological needs as mediating the impact of environmental factors on motivation. This focus does not imply that only environmental factors are pertinent to the study of motivational development, because SDT also emphasizes personal factors. These include causality orientations that may influence individuals' tendencies to seek out opportunities to be autonomous. Deci (1980) suggested that a high level of autonomy orientation represents personal causation, which relates to self-determined behavior.

By contrast, a high level of impersonal orientation represents impersonal causation, and is related to non-self-determined behaviour (see also Deci & Ryan, 1985, p. 163). People who share characteristics of this autonomy orientation are more likely to seek out opportunities to be autonomous, to make their own choices, to interpret the environment as autonomy-supportive, and to be self-determined to accomplish their integrated goals (for more details, see Deci & Ryan, 1985). This study argues further that it is only when individuals are self-determined to accomplish their integrated goals and interpret the environment as autonomy-supportive, that the satisfaction of their basic psychological needs for competence and relatedness can facilitate self-determined motivation.

In addition to causality orientations, SDT researchers have studied the influence of a variety of other personal factors on the development of motivation. These personal factors include self-actualization, self-esteem, self-consciousness, resilience, and persistence. For example, Deci & Ryan (1985) found that self-actualization, which comprises the concepts of self-reliance, and spontaneity, was positively correlated with autonomy and modestly correlated with control. They also found a strong negative correlation between self-actualization and impersonality. Self-actualization is measured by Shostrom's (1966) Personal Orientation Inventory. Using Janis and Field's (1959) measure of esteem, Deci and Ryan (1985) have also shown a positive relationship between self-esteem and being autonomy orientated. Plant and Ryan (1985) found a negative relationship between public consciousness, where one is likely to be aware of oneself in the same way as external controllers might be, and intrinsic motivation. Private self-consciousness, where one attends to internal states, is found to be related to a high level of each of the causality orientations. Endurance resilience may also represent a significant factor influencing motivation, for example

in understanding situations in which some students persist with participation in programmes of study while others choose to leave (Walker et al., 2006).

This study opens the door to qualitatively investigating what and how both personal and environmental factors impact on motivation rather than just measuring these factors quantitatively as has been done in previous SDT studies. The interpretive case study approach examines individuals as cases, and provides the opportunity to probe the uniqueness of their experiences in an open system, as they tell their stories via semi-structured interviews. Open system implies that no assumptions are made in terms of predefined personal or environmental factors influencing the individuals' motivations. The participants are only led to tell their own stories about how and whether or not they are motivated to participate in various activities or academic courses in the semi-structured interviews. Next, these accounts of what and how personal and environmental factors impact on the participants' motivations in this Chinese university will be analyzed and interpreted, a process that will be instructed by the framework and proposition of SDT.

In summary, this study is informed by the theoretical assumptions of SDT, namely that basic psychological needs mediate the impact of environmental factors on motivation, and that in addition to environmental factors, personal factors also impact on motivation. The framework of SDT instructs the critical perspective with which the different cases' experiences of being motivated to participate in various activities and academic courses in a Chinese university are interpreted. This interpretation explores a different social and cultural context to those investigated in previous SDT studies, thus expanding the range of its relevance and theoretical complexity. In particular, the interpretive different stories existing within this different social and cultural context

are implied to define the personal and environmental factors. In other words, the factors specific to this context add new definitions of personal and environmental factor to take into account. Furthermore, by using an interpretive case study design, this study widens the research methods that can be used to explore SDT studies. Most previous SDT studies have been conducted quantitatively, and there is only one quantitative study (e.g., Grouzet et al., 2004) that has examined the sequence from basic psychological needs to environmental factors to motivation and finally, to consequences. So far, only this quantitative study has examined how basic psychological needs interact with environmental factors and motivation. The current interpretive case study examines this interactive relationship qualitatively, and defines the relevant environmental factors and personal factors within the context of this Chinese university.

2.3 The Nature of “Self” in the Chinese Social Context

2.3.1 University Students as Self-Determined and Proactive Organisms

As summarized earlier, within the framework of Self-Determination Theory (SDT), Chinese university undergraduates must be considered proactive organisms, that is, organisms proactively pursuing effective functioning in the Chinese social world. Organismic theories, of which SDT is one, assume that students have an innate and natural tendency for “assimilating new information, exploring novel terrain and internalizing and integrating ambient practices and values” (Ryan & Powelson, 1991,

p. 51). Vygotsky argues that organisms are actively involved in personal growth, stating that “human beings are active participants in their interaction with the environment” (Vygotsky, cited in Valsiner, 1988, p. 125).

According to Deci and Ryan (1991, p. 238) the proactive self is motivated to regulate behaviour by assimilating or internalizing external forces in order to function effectively in the social world. The motivation to function effectively enables both the ability to act self-determinedly and the continued growth of self-determination (Deci & Ryan, 1985). Deci and Ryan (1985, p. 164) examined self-determination using Loevinger’s (1976) perspective of ego development, in which the ego develops toward self-determined regulation, and found that organismic unity (i.e., individual human being) and the function of self-determination are related to high levels of ego development.

Erikson’s (1968) ego development theory is consistent with the claims of SDT and sheds further light on the motivational process of internalization by the proactive self. Erikson (1968) argues that ego development is involved in self-identity formation. Combining the principles of self-identity formation and SDT, ego development can be seen as proceeding through the internalization process, differentiating and assimilating external forces, and moving towards identity formation. In other words, ego development goes through the steps of introjection and identification towards identity formation (Erikson, 1968, p. 159). The endpoint of this internalization process toward identity formation is then both the “well-integrated structure” identity (Erikson, 1968) and the self-determined individual. Being self-determined can thus be argued to include the sense of purpose and direction implied by being a “coherent and well-integrated person” (Erikson, 1968).

Interacting with this ego developing (and indirectly, self-determined) identity formation, Erikson (1968) argues, is the individual's environmental context:

Identity formation, finally, begins where the usefulness of identification ends. It arises from the selective repudiation and mutual assimilation of childhood identifications and their absorption in a new configuration, which, in turn, is dependent on the process by which a society (often through sub-societies) identifies the young individual, recognizing him as somebody who had to become the way he is and who, being the way he is, is taken for granted.

(Erikson, 1968, pp. 159-161)

Thus, being self-determined consists of an ongoing motivational process that alters or tries to alter significant identifications of previous experience by regulating one's behavior. This process of self-determined integrated regulation is moulded by the community, such as a university, and contributes to a complete "life plan" (Erikson, 1968, p. 161). The transition from high school to college or university means that the community surrounding the individual changes, and this can impact on the internalization process (Adams et al. 2000). Adams et al. (2000, p. 103) states that such transitions can impact ego strength, the individual's personality, and their self-determination. Bloom (1975, p. 55) emphasizes that establishing a new identity, distinct from that provided by the original family situation, is one of the major tasks facing college students.

Within the university context, undergraduates are proactive organisms with expectations of how the university environment can enhance their development. For example, Pancer et al. (2000) argues that in the weeks and months leading up to their first university classes, undergraduates expect university life to offer them significant opportunities for personal, social, and intellectual growth (Pancer et al. 2000, p. 39). In an empirical study of university students' adjustment to university life, Gan and his colleagues (Gan, et al. 2010) compared the relative importance of proactive and preventive coping among 403 freshmen at a Chinese university. Findings suggested that only proactive coping plays an important role in university adjustment, and that proactive coping is a dispositional trait rather than a coping strategy, given that effective adjustment is one aspect of effective functioning in the social world. In the Chinese social context, university undergraduates are thus shown to be proactive organisms who actively internalize external forces, such as the new aspects of their university environment, into their self-determined coping behaviors in order to fulfill their identity formation and ego development.

2.3.2 Chinese Undergraduates' Interdependent and Independent Self Construal

Besides being defined as proactive organisms who reach self-determination through internalization, Chinese university undergraduates can be described in terms of their self construal. The formation of identity, or how the self is construed, differs depending on whom the self is seen as relative to. Markus and Kitayama (1991) highlight two types of self-construal, independent, when focusing purely on the

individual, and interdependent, when focusing on people's relationships with others. The distinction between the two types of self-construal can be influenced or constrained by culture, norms, beliefs, and values (Shweder & Bourne, 1984; Marsella et al. 1985; Triandis, 1989 cited in Singelis, 1994, p. 581). For Chinese undergraduates, operating within a collectivist Chinese culture, interdependent self-construal dominates (Markus & Kitayama, 1991).

For Markus and Kitayama (1991, p. 226) independent self-construal, which is exemplified in many western, individualist cultures, is defined as "bounded, unitary, and stable". Independent self-construal emphasizes personal thoughts, abilities and feelings, and the unique role by expressing self (Singelis, 1994, p. 580). Individuals with highly developed independent self-construal tend to make internal attributes, separateness and uniqueness of individuals, promote their own goals and communicate directly (Singelis, 1994, p. 580). Interdependent self-construal, exemplified in Asian, collectivist cultures, is defined by Markus and Kitayama (1991) as "flexible, variable". Individuals with highly developed interdependent self-construal emphasize external and public features, such as status, social roles, positions and relationships and the significance of experiencing feelings of belonging (Singelis, 1994, p. 581). Individuals with highly developed interdependent self-construal are preoccupied with fulfilling their social roles and engaging in appropriate actions; communication occurs more indirectly, as individuals try to read others' minds (Singelis, 1994, p. 581).

Triandis (1989) argues that the difference between collectivist and individualist cultures influences what type of self construals dominates in each culture. Collectivist cultures encourage those cognitions that coincide with the values of the group,

whereas individualist cultures encourage those cognitions which refer to personal traits, abilities and states (Singelis, 1994, p. 582). Chinese culture is considered as collectivist, emphasizing the synthesis of different parts of problem or situation into an integrated or harmonious whole. The highly developed interdependent selves characteristic of collective cultures possess cognitions about family duty, the wisdom of elders, the need for harmony and so on (Northrop, 1946; Moore, 1967 cited in Markus and Kitayama, 1991, p. 227; Singelis, 1994, p. 582). In China, self-construal is highly dependent on the different roles played by the “self” in different social relationships (Fan, 1992). In other words, the spirit of the Chinese “self” is strongly expressed in terms of social relationships and Chinese people view social relations as an essential and inevitable part of their lives (Fan, 1992). Bond (1986) bridges the link between these concerns and behaviour, suggesting that Chinese people tend to act in line with the expectations of others, or in compliance with social norms rather than be motivated by personal goals or wishes.

However, this is not to say that independent self-construal does not exist in collectivist cultures. Markus and Kitayama (1991) posit that though one type of self-construal may be dominant, such as interdependent self-construal within Chinese collectivist culture, there is still room for the other, in China’s case, independent self-construal. For example, Trafimow et al. (1991) found that Chinese people produced more collective cognitions than North Americans. However, Trafimow et al.’s study (1991) does not rule out independent self-construal for Chinese participants. For example, in a review of Yau and Smetana’s (2003) study on Chinese adolescents’ parent-child relationships, Yeh et al. (2007) argued that the Chinese self develops both independently and interdependently. Yau and Smetana (2003) found that Chinese adolescents tended to protect their personal domain and individual autonomy and the

right to challenge parental authority. Historically, Chinese culture has also been greatly influenced by Confucius's postulation that the Chinese sense of "self" is characterized by the power of rational independence, both in terms of an inherently independent character and the ability to be independent (Zhang, 1992). Zhang (1992) insists that although Confucius's perspective developed in the era of Chinese feudal society, it is the first and longest-standing Chinese ethical theory of "self" to remain embedded in Chinese people's values at present. For example, within the context of Chinese universities, it has been revealed that university freshmen, who are selected by the Chinese College Entrance Examination (CCEE), experience pride in starting new lives as a direct result of their own, *independent* efforts and realize that they have gained themselves "seats" in society (Zhang & Hu, 1994). The achievement of attending university encourages Chinese undergraduates to respect themselves, develop stronger self-confidence and become more self-determined than before (Zhang & Hu, 1994).

In putting together a picture of Chinese undergraduates, defining their self-construal within their collectivist Chinese culture is a necessary complement to understanding them as self-determined, proactive organisms. Chinese self-construal is mostly interdependent, although research has shown evidence of independent self-construal. The relationship between the independent self and its emphasis on internal personal development and the interdependent self with its emphasis on retaining relationships, being accepted and respected by others, is unproblematic (Singelis, 1994, p. 582), and thereby reinforces the existence of the Chinese dual self.

2.3.3 The Consequences of Interdependent Self-Construal for Cognition and Motivation

The dominance of interdependent self-construal in the Chinese self entails an appreciation and need for people that is greater than that of those with independent self-construal (Markus & Kitayama, 1991, p. 228). The goals of others, for example, those whose acceptance is sought, and other in-group members, tend to be adopted as personal goals (Markus & Kitayama, 1991, p. 228). Ensuring that one remains aware of others' goals, needs, and desires provide a better chance of maintaining relationships with them (Markus & Kitayama, 1991, p. 228). Cognitively, these individuals are motivated to know and understand their social surroundings, particularly those involving direct interactions with others. These situations maintain relationships and provide the opportunity to represent themselves as an interdependent self (Markus & Kitayama, 1991, pp. 231-232). Active perception of others and their relationships to the interdependent self results in a high degree of self-control and agency to maintain, enhance or foster one's relatedness or connections to others (Markus and Kitayama, 1991: p. 228, 231). Chinese people are described as motivated to respect and obey their superiors within their social in-group, a motivation that serves to maintain relationships with these superiors but also constrains individual expressions, goals or desires (Liu, 1986, p. 78). Briefly, the motivation of those with interdependent self-construal is reliant upon others and relationships as referent even if this restrains one's own needs or desires (Markus & Kitayama, 1991, p. 240). By necessity, the needs, desires and goals that motivate the interdependent self to act require the consideration of relatedness and interdependence, which are gained by an acute understanding of the social environment.

Murray (1938) and Hilgard (1987) proposed that people are motivated to satisfy interpersonal needs in an interdependent context. These needs include deference, similitude, affiliation, nurturance, succorance, avoidance of blame and abasement (Markus & Kitayama, 1991, p. 240). Bond (1986) finds that Chinese people in particular present a high level of need for abasement, socially-oriented achievement, change, endurance, intraception, nurturance and order; a moderate level of needs for autonomy, deference, and dominance, and succorance; and a low level of need for individual-oriented achievement, affiliation, aggression, exhibition, heterosexuality and power. The need to maintain a perception of positive self is also considered as one of the motives driving those with a dominant interdependent self-construal (see, e.g., Harter, 1983; Steele, 1988 cited in Markus & Kitayama, 1991, p. 242). However, neither Murray's (1938) list of needs nor the need for maintaining positive self have been considered in relation to the three basic psychological needs of Self-Determination Theory (SDT). This need taxonomy remains overlooked in terms of how these basic psychological needs facilitate internalization, especially in a socially-motivated, collectivist context such as that of the Chinese university.

Given that needs vary according to self-construal type, that their satisfaction can be seen as energizing people's motivation to act or behave, and that according to SDT particularly the satisfaction of basic psychological needs does this by mediating the impact of environmental factors on motivation, this study examines how Chinese university undergraduates express the needs that motivate them to participate in various university activities or academic courses. Crucially, Chinese undergraduates are here defined as proactive organisms with dual selves (dominant interdependent self-construal, still existent independent self-construal). This study tries to

conceptualize these different needs according to the three basic psychological needs of relatedness, competence, and self-determination, in order to examine how basic psychological needs are implied. Based on this, the study attempts to determine how these basic psychological needs mediate the impact of factors in the university environment on the self-determined motivation of these students. In addition, Chinese undergraduates' self-determined motivation to function effectively, part of which requires proactively attending school and university, is influenced by a combination of social and environmental factors and their interdependent self-construal.

2.3.3.1 The Impact of Interdependent Self-Construal and Chinese Culture on the Motivation of Chinese Undergraduates

Chinese undergraduates exist within Chinese official-based society. The traditional values and expectations of individuals act as extrinsic regulators, impacting on how undergraduates express their self-determined motivation to function effectively through attending university. This section of the literature review introduces how particular aspects of the traditional values of Chinese collectivist culture, such as the historical significance of exams and aspiration to become an official, impact on Chinese undergraduates' motivation to attend university at present.

2.3.3.1.1 The Historical Significance of Exams and being Officials to Chinese People

In ancient times, working with one's intellect was unique to being an official, a position that brought wealth and elevated social stature. Key to becoming an official was succeeding at the Chinese Imperial Examination (CIE). Today, higher education, accessed by succeeding at the Chinese College Entrance Examination (CCEE), provides an opportunity for Chinese people to gain access to jobs that will allow them to work with their intellect and access wealth and elevated social positions. Individuals are expected to pursue these goals and those who do so, via taking the CCEE and going to university, are accepted and respected within Chinese culture. In other words, traditionally respected aspects of Chinese culture such as the aspiration to become an official, which required success on the CIE and allowed one to work with their intellect, are reflected in contemporary societal respect for those that take the CCEE, attend university, and aspire to a job that will allow one to work with their intellect.

From the Sui dynasty until the Qing dynasty, a period of around 1300 years, Chinese officials were selected by the Chinese Imperial Examination (Zhou, 2009). The CIE was held annually by the ancient Chinese central government and it aimed to select people to work for the Chinese government as officials according to their performance in the examination (Zhou, 2009). CIE candidates had to complete their school education successfully in order to take the exam (Ma, 2000). School lessons were entirely oriented toward sitting the CIE (Zhou, 2009). Even today, Chinese school education is wholly directed towards sitting the Chinese College Entrance

Examination (CCEE). In ancient times, thus, schools provided a continuing stock of Chinese intellectuals to vie for government positions (Zhou, 2009). The most significant, if not the only motivation to study in ancient China was to perform to the best of one's ability on the CIE, in order to be selected to work as a Chinese government official.

The ancient Chinese were highly motivated to excel in exams and become officials because this meant they were better able to pursue the goals of wealth and social stature. In economic terms, China was an agriculture-based society, in which the low level of productivity and the slow population growth rate resulted in poor living conditions (Ma, 2000). For instance, during the feudal period that lasted from 211 B.C. to 1840 A.D., the population growth rate was fifteen percent per year (Ma, 2000). Natural disasters and chaos caused by war and plague impacted on the majority of the population who lived by cultivating the land, destroying their crops and scattering the population. Such poor standards of existence fuelled the desire to be able to change one's life and promote the social position of their family (Ma, 2000).

This desire was retained even in the first sixty years of the relatively successful Song Dynasty (Liang, 2002). The national economy, based on agriculture and handicraft, had developed significantly compared to previous dynasties, technology and productivity had improved, and there was an unprecedented circulation of commodities as the nation set policies for developing the economy and encouraging cultivation (Liang, 2002). Despite this progress, people who cultivated the land for a living accounted for eighty-five percent of the population, and most suffered ever-increasing taxation (Ren, 2002). Qi (1987) reveals that between the period of the North Song dynasty (960 A.D.-1127 A.D.) and the South Song dynasty (1127 A.D.-

1279 A.D.), the wealthiest feudal landlords extended their ownership of cultivated land from thirty or forty percent to fifty percent, while less wealthy landlords owned as much as twenty to thirty percent (Qi, 1987, p. 268). In contrast, people who made their living through cultivation and accounted for eighty percent of the population owned as little as thirty percent of the land (Qi, 1987, p. 344). These people felt the burden of heavy taxes and fees required by the state (Liang, 2002). In the Song dynasty, almost one third of the annual income of those in one of the most exploited classes was paid to the state in taxes (Ren, 2002).

The state exploited people by collecting taxes, and taxes increased as the state developed (Deng, 2009). Importantly, the development of the state did not equate to raising the standard of living for people in ancient China. The central authority continually sought to increase fiscal revenue and assessed the efficiency of its tax collectors according to the amount of money required (Mi et al. 2008). Promotion or demotion depended on how well government officials collected taxes. It is not difficult to see from the literature that officials collected taxes rather than paying taxes. Moreover, they earned decent pay from government. Further evidence that officials collected rather than paid taxes comes from the literature concerning the Wang Anshi Reform in AD 1069. Wang Anshi was a politician in the North Song Dynasty. He tried to reform the tax system by requiring officials to pay the same taxes as other Chinese people, who paid according to the amount of land they owned. The Wang Anshi Reform represented the principle of fairness but it was abolished by the central authority, whose running was dominated by feudal nobility (Deng, 2009). Therefore, people in ancient times were motivated to perform to their best ability in the Chinese Imperial Examination in order to become government officials and collect rather than pay taxes, in and amongst other financial benefits.

The Chinese Imperial Examination (CIE) opened the door to these benefits if one was motivated to pursue authority, wealth, social status and scholarship in the Chinese official-based society. Essentially, the CIE presented the integration of politics and school education (Ma, 2000). The exam was administered in the spirit of openness and fairness to each candidate; good performance on the CIE permitted people to work for the government no matter which hierarchy they came from (Zhou, 2009). The openness and focus on merit of the CIE was new to Chinese people. Before the Sui dynasty, there were three routes becoming an official: one could make contributions to the Chinese army, advise the government well, or inherit an official position from the previous generation (Ma, 2000). Therefore, the CIE was an important development for social mobility.

Confucius provided another, non-financial reason why Chinese people attributed such high significance to exams and becoming an official. Confucius said that “to be a scholar is to be at the top of society while all other careers are inferior” and “a good scholar can become an official” (Yan & Liu, 2006). In ancient China, intellectuals had to accept Confucian values and were tested on them in the Chinese Imperial Examination. As a result, the Confucian spirit became the faith of Chinese intellectual rigor, and spread to wider society as a cohesive, uniting force (Zhou, 2009), contributing to the formation of Chinese official-based society and accompanying attitudes to the pursuit of authority, wealth, social status and scholarship. Zhou (2009) points out that if the representatives of Chinese culture are intellectuals, then their spirit and values are constructed by the Chinese Imperial Examination. The integration of school education and bureaucratic selection by this examination influenced the manner of thinking, the desires and values of Chinese intellectuals and

even those of the wider Chinese population (Ma, 2000). In sum, ancient Chinese people studied hard for extrinsic reasons, to become officials rather than to enhance their own personal growth or interests (Ma, 2000).

Working as a government official in ancient China thus meant a decent pay, collection rather than payment of taxes, a respected social position for one and one's family and being able to provide a good standard of living and education for the following generation. China's official-oriented society was formed as people were motivated to become officials for wealth, social positions and authority, and for the acceptance and respect the position afforded them. Consequently, the exam that provided access to these desired goals since the Sui dynasty was significant to Chinese people. In the Ming or Qing dynasty, even though one could not become an official due to comparatively poor performance in the CIE, they would still be respected and treated as an intellectual by others because they had been educated in the Chinese schools; this respect is still an aspect of Chinese cultural tradition today (Zhou, 2009). Then, as now, the Chinese self was dominated by interdependent self-construal, such that Chinese people perceived and accepted themselves based on how they were respected and accepted by others in Chinese society. Aspiring to become a well-regarded intellectual encouraged Chinese people to study hard to excel on the CIE, in order to be selected as a government official, much in the same way as they try their best on the Chinese College Entrance Examination today.

2.3.3.1.2 The Significance of Exams and Attending University in China at Present

Contemporary Chinese official-oriented society has its roots in peoples' struggle to obtain wealth, authority, social status and scholarship amidst poor living conditions in ancient China. Underlying this struggle were Confucian values that implied the superiority of those who worked with their intellect: "those labouring with brain are to be served; those toiling with brawn are to serve" (Ni, 2009). Being an official in ancient China involved such work, and even today those who work with their intellect, whether officials or not, are respected. And, as the Chinese self is dominated by interdependent self-construal, which emphasizes the significance of acceptance and respect from others, being an intellectual remains significant to Chinese people today.

For Chinese people, the ultimate motivation in life is to pursue wealth, social status and authority. Means for obtaining these benefits have diversified since the ancient times. Today, wealth and authority can be pursued in many fields of industry, such as through being able to manage people or through a human resources role. Management and human resources are the speciality of China's official-oriented society (Li, 2008). People in these positions can earn a decent living and are perceived as being able to work with their intellect. If people work for the government or good enterprises in big cities, where they hold authority and earn decent salaries, they are considered successful, whereas if they work in small cities or in the countryside, they might be looked down upon and considered less successful (Ni, 2009). However, such positions require a university education. University graduates are considered by wider Chinese society as today's equivalent to ancient Chinese officials, as people able to work with their intellect. Thus Chinese people are motivated to attend university. Preparing to

work with one's intellect after graduation in what is a highly competitive official-oriented society is therefore involved in Chinese undergraduates' motivation to participate in university activities or academic courses.

Chinese students are accepted into university based on their performance on the Chinese College Entrance Examination (CCEE), which was first administered in 1952 after the People's Republic of China was established in 1949. As in ancient times, school education before higher education today is oriented towards this exam. Ma (2000) has noted that the modern Chinese education system is influenced by, but not identical to, the Chinese Imperial Examination (CIE). The CIE integrated schooling and the ministerial selection system in ancient China, and the CIE is also the root of China's examination-oriented education system (Ma, 2000). Separating ministerial selection and schooling, however, has been one of the positive outcomes of the discontinuation of the CIE (Li, 2008). Educational examination has shifted from a government entrance focus to college entrance focus as the CCEE replaced the CIE. The CCEE dominates the school academic criteria and dictates the focus of the teaching syllabus; the CCEE works as a conduit between general education and higher education (Tu, 2003). After the Chinese Imperial Examination was abolished in the early twentieth century, schools began to teach more modern social and natural sciences with new curricular content. Therefore, there has been a gradual change from cultivating new officials to cultivating graduates with a wider education that is better adapted to contemporary Chinese society (Jiang, 2008).

Achieving highly puts a lot of pressure on Chinese students. Attending university is fiercely competitive given the limited available university places. The Chinese Education Ministry required changes to be made in the education system so that the

focus of education was not limited entirely to requiring students to achieve the highest scores possible. This educational reform, “Quality Education Reform”, requires that school education not only focus on knowledge teaching, but also on the development of more general abilities and qualities, such as moral, intelligence and physical development (Han, 2001). However, as university selection depends solely on the academic scores students obtain on the CCEE (Han, 2001), the “Quality Education Reform” can be argued to have been passed in vain as students still have to focus purely on exam scores in order to attend higher education. If the role of the CCEE as a conduit between schooling and university cannot be changed, and the only qualification for students to enter higher education is the scores they gain on the CCEE, Chinese students must take the examination seriously and study hard in order to attend university.

Chinese parents try their best to send their children to those primary and high schools that are perceived as best preparing students for the CCEE (Ma, 2000). Key primary or high school students have a better chance of attending university as they gain better quality instructions of how to obtain high academic scores than normal primary or high school students. From the ancient times to present and from the countryside to the towns and cities, taking examinations has always been a significant aspiration in Chinese people’s lives and studying hard in preparation for exams is the central task in the lives of Chinese students (Li, 2008). To Chinese people, the notification of exam success brings a moment of significant achievement to their lives. Conversely, exam failure represents profound personal disappointment and sadness (Li, 2008). In December 1998, a social survey carried out by the newspaper, “Chinese Youth”, reported that following a period of disuse of nearly twenty years, the reintroduction of the CCEE was regarded by 55.5 percent of the respondents as the most influential

event in terms of Chinese people's future development (Tu, 2003).

Being able to work with one's intellect, though intensely well-regarded in Chinese society is highly competitive and in conflict with the job market. There are many job vacancies, but these are mainly in labour-intensive industries. There are not enough white-collar vacancies for university graduates who wish to work as professionals (Ni, 2009). In 2000, there were 1,060,000 college and university graduates, and this has increased to 4,950,000 graduates in 2007. During this period, the number of Chinese graduates has increased three times over. In 2009, there were over 6,000,000 graduates (Ni, 2009) entering a job market without enough white-collar jobs. Nowadays, attending higher education, though helping one obtain the status of intellectual, can no longer guarantee Chinese graduates with decent jobs. In spite of this, traditional values of respect for intellectuals have meant that the enthusiasm to attend university has remained much the same. In the end, graduating from university implies that a student is qualified to enter an intellectual job when such a vacancy arises, even within the current climate of limited white-collar vacancies, whereas this is a virtual impossibility for those without such qualifications.

2.3.3.1.3 The Motivation of Chinese Undergraduates to Participate in Various University Activities or Academic Courses

Given intense competition to obtain a job where one can work with their intellect, Chinese undergraduate students are highly motivated to develop their competencies through participation in various university activities or academic courses. Entering

university, most Chinese students lack experience of developing those competencies future employers will be interested in, their *working abilities*, as their time has mostly been occupied with the strict academic study that will help them on the CCEE.

Chinese students are especially keen to develop their interpersonal skills, given Chinese interdependent self-construal and the sorts of positions in management and HR that they are aiming for. Social relationships play a significant role in those jobs that allow one to work efficiently with one's intellect. Therefore, maintaining relationships with others by knowing and understanding them and the situation of the relationship is not only motivated by a need for relatedness, but also by the demands of the future competitive work place.

As discussed previously, in the same way that ancient Chinese students studied hard to become officials in order to pursue wealth, social status, and authority rather than to enhance their personal development (Ma, 2000), pre-university Chinese students at present only study hard to obtain the highest scores on the CCEE so that they can attend university. However, personal development cannot be limited to obtaining examination scores as Chinese people are defined as proactive organisms (Deci & Ryan, 1985; 2002). Self-Determination Theory postulates that all individuals have natural, innate, and constructive tendencies to develop "an ever more elaborated and unified sense of self" (Deci & Ryan, 2002: 5). In the field of education, for example, students possess inherent tendencies to actively learn, grow, and integrate (Ryan, 1995). These tendencies cannot be fulfilled, if students are only concerned with examination performance. As such, a further motivation for Chinese university undergraduates is the motivation to grow and develop through the satisfaction of their different needs. This overall personal growth and development can occur in different

aspects of the lives of Chinese undergraduates.

Opportunities for this growth are afforded to students by the new university environment. Pancer (Pancer et al., 2000, p. 39) states that “first year undergraduates must learn not only to adjust to the new demands of adult independence; they must also cope with an environment that is very different from the one they have experienced in their high school years”. Before university, Chinese students experience strict instructions and supervision by their teachers. Most students live with their families, who supervise their academic studies when they are working at home. The immersion into university life is new to each student, bringing new responsibilities that were previously carried out by parents, such as managing money, grocery shopping, cleaning, and cooking. It also means new social relationships with peers rather than family, among the other challenges students encounter in this new environment. University life is characterized by “the strong drive for independence” (Bloom, 1975: 45), as students live much more independently compared to their previous experiences. Tao et al. (2000) describes how the learning and living situations changing from high school to university and the key social factors impacting on Chinese students’ adjustment to university life:

Most Chinese universities are in big or medium sized cities, adolescents usually have to leave home and go far away to another province or city to attend university; the result is that most live in university dorms together. In fact, most Chinese undergraduate students share a room with the same cohort of other six or seven students throughout their university years. Moreover, because the system for student management in Chinese university is group-based, the students are

divided into many classes by their major subjects. All these classmates then have their classes together, take part in university activities together (i.e. sports competition), and even live in several dorms together. Although adult supervision (mainly from adults and school teachers) is present throughout all levels of education in China, university teachers maintain much less control over students than do teachers of younger students. In Chinese universities, however, there is a major teacher for each class in charge of student management. These major teachers just pay attention to students only during the first several weeks after new students enter universities, and then run the class through class leaders, such as class monitors.

(Tao et al. 2000, pp. 125-126)

Attending university thus provides an entirely new environment with a possibility for self-determined behaviours. These are actively sought out by Chinese undergraduates who are driven to develop both themselves, as proactive organisms meeting their needs, and their working abilities, to meet the demands of the job market after graduation. Importantly, thus, cultural factors inherent in Chinese official-oriented society and the development of interdependent self-construal have an influence but do not entirely determine the motivation of these students.

2.4 The Process of Internalization

The motivation of Chinese undergraduates to participate in various university activities or academic courses therefore involves both intrinsic and extrinsic drivers. Chinese undergraduates are defined as being extrinsically motivated when considering the influence of those Chinese cultural motivators involved in attending university (i.e., importance of being respected as an intellectual or at least of getting the chance to work with one's intellect in a historically official-based culture). Although intrinsic motivation is by definition self-determined (Deci & Ryan, 1985), extrinsic motivation can also be self-determined through a process of internalization. Self-determined extrinsic motivation is dependent on internalizing external factors and is associated with personal development. This study focuses on how Chinese undergraduates internalize factors in their new university environment, how this impacts on their self-determined extrinsic motivation to participate in various activities or academic courses, and how this relationship is mediated by their implied basic psychological needs.

2.4.1 The Relationship between Intrinsic Motivation and Extrinsic Motivation

Studies conducted in the 1960s and 1970s contrasted intrinsic and extrinsic motivation and found a negative relationship between the two. deCharms (1968) characterized extrinsic motivation as being non-autonomous, which is antithetical to self-determination, the most significant characteristic of intrinsic motivation. Lepper

and Greene (1978) argued that the relationship between intrinsic and extrinsic motivation was invariantly antagonistic (Deci et al. 2006). Deci et al. (1999; 2001) found that extrinsic motivation generally tends to undermine intrinsic motivation. Human beings are motivated to attain tangible rewards, and this type of extrinsic motivation is non-autonomous. However, studies conducted in the 1980s (e.g., Koestner et al. 1984; Ryan, 1982; Ryan et al. 1983; Luyten & Lens, 1981) suggested that extrinsic motivation may actually *enhance* intrinsic motivation. These studies showed how contextual events such as offering a reward, the provision of positive feedback, or the imposition of a deadline enhanced rather than undermined intrinsic motivation (Deci & Ryan, 2002, p. 11). These findings implied that extrinsic motivation is not invariantly controlled (Deci et al. 2006, p. 20).

In comparison to intrinsic motivation, wherein behaviour is self-determined because an activity or task is inherently enjoyable, extrinsically motivated behaviour involves different degrees of self-determination. These are dependent on the effects of outside controls on behaviour and how the choices relate to one's own values and desires (Deci & Ryan, 1985, p. 35). Self-Determination Theory places “not invariantly controlled” extrinsic motivation on a continuum, where different stages in the process of internalization imply different degrees of self-determination.

2.4.2 The process of Internalization

Internalization refers to the assimilation of external regulation into the self (Osterman, 2000). Hartmann and Lowenstein (1962, cited in Connell & Ryan, 1987, p. 67) define

internalization as “the process whereby individuals transform regulation by external sources into regulation by internal forces”. Freud (1923/1962) emphasized the integration of external into internal resources by postulating that synthesis, one method of integration, is the essential function of ego. For Freud, the tendency toward unity by integration is the central drive of life (Ryan, 1995). Rogers (1963) argued that living things have one central motive of actualization, the ongoing expression and integration of one’s potentialities.

From an organismic perspective, people develop by actively integrating external forces into the self through their own behavioural regulation. People differentiate between specific elements of the internal and external environment and these elements are then brought into harmony with existing internal structures in an overall process of refining and elaborating internal structures (Deci & Ryan, 1985, p. 114). In other words, the regulation of behaviour can be seen as a process of comparing one’s current state to a standard (i.e., the desired outcome) and then acting to reduce the discrepancy (e.g., Kanfer, 1975; Miller et al. 1960). Where the internalization process involved in extrinsic self-determination is concerned, the regulation of behaviour is a comparison of one’s current state to an external standard, and thus acting to reduce the discrepancy is extrinsically motivated (Deci & Ryan, 2002). Deci and Ryan (2002, p. 15) argue that the more fully a regulation (or the value underlying it) is internalized, the more it becomes part of the integrated self and the more it is the basis for self-determined behaviour. Human beings are forced to interact with the social world they inhabit. Internalization and consequent self-determined behaviour (as one aspect of personal development), enables more competent functioning in this social world (Deci & Ryan, 1985, pp. 130-131).

The development of self begins with intrinsic activity (Deci & Ryan, 1991, p. 239). The intrinsic *need* for self-determination motivates the internalization process (Deci & Ryan, 1985, p. 131). Satisfying this need, and thus becoming self-determined, is the ideal outcome of the process of internalization (Deci & Ryan, 1985, p. 131) and is one aspect of personal development. Being self-determined leads students to display greater flexibility in problem solving, more efficient knowledge acquisition, and a strong sense of personal worth and school responsibility (Deci et al., 1991, p. 325). Greater internalization has been shown to afford many advantages including “more behavioural effectiveness, greater volitional persistence, enhanced subjective well-being, and better assimilation of the individual within his or her social group” (Ryan et al. 1997 cited in Ryan & Deci, 2000, p. 73).

The integration of cultural values and expectations, as external forces in the social world, into the self is one aspect of developing competent self-determination. Being more competently self-determining is important to the development of self, motivating the internalization process to complete only when the cultural values are adopted as those of the individual (Deci & Ryan, 1985, p. 131). After early childhood, the freedom to behave intrinsically is decreased by social pressures and people are motivated to behave in line with a variety of social responsibilities (Ryan & La Guardia, 2000). Increased interaction with the social environment breeds a variety of social demands and extrinsic motivators. Chandler and Connell (1984, cited in Deci & Ryan, 1985) argue that internalized responses are positively correlated with age. As children grow, they understand and accept that the consequences of performing certain behaviours (e.g., the behaviour of “chores” in Chandler and Connell’s study, 1984) can be beneficial to their own goals. At this point, internalization can be said to have occurred.

The social environment can either support self-determined behaviour or not, and therefore there are different degrees with which behavioural regulation is self-determined. This in turn influences the internalization process. Ryan and Deci (2002, p. 14) argue, “socializing agents frequently find it necessary to promote these uninteresting behaviours, so they face this issue not only of how to promote the behaviours but, even more importantly, how to promote self- regulation of the behaviours so they will persist over the long term”. There are four types of extrinsic behavioural regulation, two that are not self-determined, and two that are self-determined. External regulation is the least autonomous, and thus least self-determined, form of extrinsic motivation. People are motivated by external factors to satisfy an external demand or a socially constructed contingency (Deci & Ryan, 2002). Although introjected regulation is more autonomous than external regulation, it is not considered self-determined (Deci & Ryan, 2000). Introjected regulation consists of partially internalized external factors, but these are not considered part of the integrated self (Deci & Ryan, 2002). The first type of self-determined extrinsic behavioural regulation is regulation through identification, which is more autonomous than introjected regulation and occurs when people internalize environmental factors into self if they value these factors (Deci & Ryan, 2002). The second self-determined form of regulation that is *still extrinsic* (logically, the most self-determined behavioural regulation is intrinsic regulation) is integrated regulation. Ryan and Connell (1989, p. 752) distinguish between some of the reasons that exemplify these behavioural regulators (i.e., external regulation, introjected regulation, regulation through identifications and intrinsic regulation) in Table 2.1.


Types of reasons	Examples
External	<p>Because I will get in trouble if I don't;</p> <p>Because that is what I am supposed to do;</p> <p>So that the teacher won't yell at me;</p> <p>Because that's the rule;</p> <p>So others won't get mad at me</p>
Introjected	<p>Because I want the teacher to think I am a good student;</p> <p>Because I will feel bad about myself if I don't;</p> <p>Because I will feel ashamed of myself if I don't;</p> <p>Because I want the other students to think I am smart;</p> <p>Because it bothers me when I don't;</p> <p>Because I want people to like me</p>
Identified	<p>Because I want to understand the subject;</p> <p>Because I want to learn new things;</p> <p>To find out if I'm right or wrong;</p> <p>Because I think it is important to...;</p> <p>Because I wouldn't want (like) to do that (negative behaviour)</p>
Intrinsic	<p>Because it is fun;</p> <p>Because I enjoy it</p>

Table 2.1 Examples of Four types of Reasons

Ryan and Connell (1989) tested these definitions of differing aspects of the internalization process by investigating achievement behaviours among school

children in two domains, pro-social and academic activities. Ryan and Connell (1989) found that different styles of extrinsic motivation and intrinsic regulation were inter-correlated by a quasi-simplex pattern, which implies that these different types of motivation lie on a continuum according to relative autonomy (Ryan & Deci, 2000, p. 73). Table 2.2 presents the Organism Integrated Theory (OIT) taxonomy of motivational types, arranged from left to right in terms of the degree to which the motivations emanate from the self (i.e., are self-determined) (Ryan & Deci, 2000, p. 72).

Table 2.2 The OIT Taxonomy of Motivational Types

Type of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Type of Regulation	Non-regulation	External Regulation	Introjected Regulation	Regulation through identifications	Integrated Regulation	Intrinsic Regulation
Relevant Regulator Processes	Non-intentional, Non-valuing, Incompetence, Lack of Control	Compliance, External Rewards and Punishments	Self-control, Ego-Involvement, Internal Rewards and Punishments	Personal Importance, Conscious Valuing	Congruence, Awareness, Synthesis with Self	Interest, Enjoyment, Inherent Satisfaction
Quality of Behavior	<div> Non-self- <div>  </div> determined </div>					
	Self-determined					

In sum, internalization is a process of personal development and becoming self-determined, through the integration of external behavioural regulators into the self. Ryan and Deci (2000, p. 71) have suggested that though the internalization process is a central issue in childhood socialization, it takes place across the life span, and in various domains, as in the behaviours and decisions of nineteen- to twenty-two-year-old Chinese undergraduates.

Ryan (1995) argues that internalization is dynamic and dependent upon social-contextual support for the satisfaction of the basic psychological needs of competence, autonomy and relatedness. These needs can be seen as facilitating the process of internalization. Therefore, trying to understand how internalization leads to being self-determined (e.g., through identified regulation or integrated regulation) depends on two initial investigations. One of these involves understanding how people express their basic psychological needs through their self-determined behavioural regulation. The second involves understanding how social-contextual environmental factors can support or hinder the satisfaction of basic psychological needs and thus the process of internalization.

2.4.3 Self-Determined Extrinsic Motivation

Judging a certain behaviour as important and valuing its outcome provides the self-determined motivation to produce that outcome through behavioural regulation. The need for self-determination energizes behavioural regulation to attain especially those outcomes that have social utility (Deci & Ryan, 1985, p. 137). Behaviours

motivated by social goals can be self-determined even though they are inherently extrinsic, because the outcomes of performing these behaviours are valued and considered important for effective functioning in the social world. These behaviours, which are not intrinsically motivated but are valued by the social environment, are instrumental for long-term effectiveness (Deci & Ryan, 1985, p. 131). In China's official-oriented society, wherein working with one's intellect is valued by the social environment, undergraduates are motivated to participate in various university activities or academic courses by goals that are at once self-determined and inherently external social goals.

People are inevitably embedded in social contexts that provide extrinsic motivators to function effectively. Internalizing social goals is the key to such effective functioning. Wentzel's (1989) study indicated that the academic achievement of adolescents was motivated by both social and learning goals. This suggests that the internalization of social goals is important for effective academic functioning. Applying Neumann and Morgenstern's (1944) rational choice theory, Schwartz (2000) argues that an individual does not internalize everything, but is "rational" within their social context. In other words, many of the decisions made about what the individual internalizes, and thus those behaviours that they are extrinsically self-determined to carry out, are determined by the family or larger social group (Schwartz, 2000, p. 81).

In sum, Chinese wider culture and the university environment impact on what gets internalized and how Chinese undergraduates regulate their behaviour. For these students, the internalization process is dynamic and dependent upon whether the environment provides the social-contextual support necessary for satisfying their basic psychological needs of competence, autonomy and relatedness. The next section

examines this dependency and how exactly these basic psychological needs can mediate the impact of the environment on Chinese undergraduates' self-determined extrinsic motivation.

2.5 Basic Psychological Needs as Mediators

2.5.1 The Reasons for Studying Basic Psychological Needs

Most motivational studies are concerned with exploring the desired consequences of motivational development rather than what produces these consequences and why they are desired (Deci et al. 1991). “Energizations of behaviour” (Deci et al. 1991, p. 327) must be studied, however, and can be conceptualized as needs that driving behaviour towards their own satisfaction. Need satisfaction through interaction with the environment is necessary for the organism to remain healthy and function effectively (Deci & Ryan, 1985, p. 3).

The most common usage of “need” comprises one’s desires, goals, wants, or values, whether implicit or self-attributed (McClelland et al. 1992), and these desires or drives motivate people’s actions indirectly or cognitively (see section 2.1). Usage of the term “need” can be applied across the life sciences. Jacob (1973) argued that living organisms have needs that require fulfilment if they are to persist and thrive. All “sentient living things” have needs that promote the health of the organism and their integration with their environment, and these can be assessed empirically and

systematically (Ryan, 1995).

Self-Determination Theory suggests that basic psychological needs facilitate integrative and internalization processes in order to promote personality development (Ryan, 1995, p. 399) and effective operation (Deci & Ryan, 2008, p. 16). The satisfaction of the basic psychological needs of competence, relatedness and self-determination is essential to motivation and growth in any domain (Deci & Ryan, 1985; Ryan, 1993). It also aids in constructive social and psychological development, and personal well-being (Ryan, 1995; Ryan & Deci, 2000; Deci & Ryan, 2001; Valery et al. 2003). For example, in terms of motivational development, the focus of this study, Ryan and Deci (2000) postulate that if people feel competent, related and self-determined and the environment is autonomy-supportive, their behaviour will be regulated through identified regulation. This is a fairly autonomous, self-determined type of extrinsic behavioural regulation. As a result of this process, these people will possess a sense of choice, volition, and freedom from excessive external pressure toward behaving or thinking in a certain way (Kuhl & Fuhrmann, 1998). If these needs are thwarted, people will be less effective at internalizing and integrating their behavioural regulation, and the result will be less self-determined motivation to engage in behaviours (Deci & Ryan, 2002; 2008). In the field of education, when student needs are unsatisfied, Deci (Deci et al. 1991; Deci & Ryan, 2002) predicts diminished motivation, impaired development, alienation and poor performance.

The study of needs provides researchers with access to addressing why human beings are motivated in terms of satisfying their basic psychological needs on a non-superficial level (Deci et al. 1991, pp. 327-328). Opportunities to satisfy any of these three needs contribute to motivated behaviour (Deci et al. 1991, pp. 327- 328).

Within the framework of Self-Determination Theory (Deci & Ryan, 1985; 2002), the role played by basic psychological needs in facilitating motivational development depends on how they mediate the impact of environmental factors (i.e., autonomy-support) on motivation (Deci & Ryan, 2002, p. 48). This is especially the case when discussing whether the environment alone (i.e., without the satisfaction of basic psychological needs) facilitates these people's optimal motivation toward a given task (Vallerand et al. 2008, p. 257).

2.5.2 Basic Psychological Needs and the School Environment

2.5.2.1 The Perceived Ideal School Environment for Self-Determined Learning and Development

Young people spend approximately 15,000 hours in school during their formative first two decades (Deci et al. 1991). Mok and Flynn (1997, p. 69) define a school as “a community of people who come together in pursuit of a common goal - the development of the physical, intellectual, vocational, social, emotional, aesthetic and moral dimensions of the young persons”. Schools should not only be considered factories that foster student achievement or high test scores; schools help students to shape their interests and values as human beings, to internalize positive work habits, and to gain confidence within a primary context of child and adolescent development (Ryan & La Guardia, 1999).

Empirical studies have examined these various functions of school. For example, Anderson's (1982, cited in Dorman, 1998) large meta-analysis of studies conducted in the 1960s and 1970s concluded that the school environment enhanced a range of student-centered variables: cognitive and affective outcomes (e.g., Barker, 1963; Brookover et al., 1978; Duke & Perry, 1978); values (e.g., Vyskocil & Goens, 1979); and personal growth and satisfaction (e.g., Bailey, 1979; Holland, 1973). Studies conducted on Australian school communities also highlighted a wider focus than academic achievement, emphasizing students' growth and development, particularly towards becoming an "independent thinker" (McGaw et al. 1992, p. 174). For example, McGaw and his associates concluded that:

Learning and the love of learning; personal development of self-esteem; life skills, problem solving and learning how to learn; the development of independent thinkers and well rounded confident individuals; all ranked as highly or more highly as the outcomes of effective schooling as success in a narrow range of academic disciplines.

(McGaw et al. 1992, p. 174)

Deci (Deci et al. 1991) provides a conceptualization of the ideal school system according to the principles of Self-Determination Theory. Herein, the ideal school system helps students succeed by "promoting a genuine enthusiasm for learning and accomplishment and a sense of volitional involvement in the educational enterprise" (Deci et al. 1991, p. 325). As "volitional involvement" results from integrated internalizations (Deci & Ryan, 1985, p. 143), the school system is held responsible for

promoting this so that children's self-determination is encouraged. The primary context for child and adolescent development is provided by the school environment, which should provide "opportunities to develop their intellectual capacities, to experience a sense of competence and belonging, and to interact with supportive, non-parental adults" (Roeser & Midgley, 1996, p. 408). In this way, the school environment can promote integrated internalization through supporting students' basic psychological needs of competence, relatedness and self-determination (Ryan, 1995). The satisfaction of basic psychological needs is dependent on contextual and cultural factors within the environment, and given that learning, achievement, and the expression of self are developed through cultural internalization and identity formation, schools are both contexts of cultural socialization, in which students' behaviour is regulated *and* contexts that promote social and cognitive development (Ryan, & Stiller, 1991, p. 118).

2.5.2.2 Basic Psychological Needs

Integrative or internalization processes are dynamic and dependent upon social-contextual support in order to satisfy basic psychological needs (Ryan, 1995; Deci, et al. 1991). Developing this viewpoint, Ryan (1995) conceptually links integrative tendencies to those specific developmental processes that are shown to be facilitated by conditions that fulfil psychological needs for competence (Harter, 1978; White, 1963 cited in Ryan & Deci, 2000), relatedness (Reis, 1994; Baumeister & Leary, 1995 cited in Ryan & Deci, 2000), and self-determination (deCharms, 1968; Deci, 1975 in Ryan & Deci, 2000).

Greenswald (1982) conceptualizes personality as a non-unitary entity, made up of more or less boundaried operating systems. Greenswald (1982) thus conceptualizes personality (e.g., the self-determined personality) as culturally dependent. Supporting this view, Dannefer (1984) suggests that identity and needs are socially determined. Ryan (1995) specifies that Self-Determination Theory (SDT) views psychological coherence and integrity as a function of external influences rather than intrinsic to organismic nature. Combining SDT and socio-cultural approaches together, Ryan and Deci (1991) postulate that although organisms possess natural integrative tendencies the power of social contexts must also be acknowledged.

Insel and Moos (1974, cited in Osterman, 2000) also argue that the satisfaction of basic psychological needs depends on environmental support and that the social context plays a significant part in determining whether individual needs are satisfied or not. Deci and Ryan (2002) have suggested that the three needs of competence, relatedness and self-determination are universal and developmentally persistent. In other words, these needs must be satisfied even in cultures with different values. The relative factors and avenues required for need satisfaction change across the life span, along with how these needs are expressed in each culture (Deci et al. 1991). As a result, how specific behaviours are regulated to satisfy underlying basic psychological needs may be different in different cultures. This is because behaviours come to have different meanings according to culturally endorsed values and practices (Deci & Ryan, 2002). This study examines how these needs are expressed and how behaviour is regulated, especially regarding participation in university courses and activities, in order to satisfy these needs in the social context of the Chinese university. This study is thus carried out within the critical perspective of SDT that does not emphasize the

different strengths of individual basic psychological needs, but rather examines how needs are affected in their interaction with the environment, wherein they have or have not been supported (Deci & Ryan, 2000).

Competence

Competence refers to feeling effective in one's ongoing interactions with the social environment and experiencing opportunities to exercise and express one's capacities (White, 1959; Deci, 1975; Harter, 1983). Competence is not an attained skill or capability, but rather is a felt sense of confidence and effectiveness in action (Deci & Ryan, 2002, p.7). It leads people to seek challenges that are optimal for their capacities and to persistently attempt to maintain and enhance those skills and capacities through activity (Deci & Ryan, 2002). If these challenges are not optimal for their capacities, competence can be expected to decrease due to increasing academic demands (Alspaugh, 1998). In their conceptualization of the need for competence, Ryan and Deci (2000) are in accordance with White (1959), who spoke of a primary propensity for competence. White (1959) suggested an energy source in humans which was a direct manifestation of a deeper structure called effectance-focused motivation. This was claimed to motivate students to impact on the environment as well as to use it to attain valued outcomes. White's (1959) conceptualization of the need for competence is therefore not only the need for competence but the need for *self-determined* competence (Deci & Ryan, 1985, p. 32).

The need for competence has been argued to be fulfilled by how schools shape students' confidence and by the provision of positive feedback. Educational institutions can help students exercise their talents and choice, and also gain

self-confidence (Ryan & Stiller, 1991). Schools can therefore provide the initial foundations of competence for students to take on significant roles as leaders in the future (Bloom, 1975, p. 18). In addition, Bloom (1975) emphasizes how students' experiences on university campuses have a major impact on their subsequent lives through the formulation of life-long values and orientations towards wider society.

Supporting competence through positive feedback is more complicated. Positive feedback will enhance motivation in general but will enhance integrated internalization only if it is administered in a way that is autonomy supportive (Fisher, 1978; Ryan, 1982). Thus, autonomy-supportive positive feedback can enhance integrated internalization and consequently self-determined motivation.

Relatedness

Relatedness refers to feeling connected to others, caring for and being cared for by others, and experiencing a sense of belonging with other individuals and within one's community (Harlow, 1958; Bowlby, 1979; Baumeister & Leary, 1995; Ryan, 1995). However, there is no concept or word in Chinese that translates literally into community. In other words, the so-called community observed in western societies does not exist in Chinese society. The concept of community, or sense of community, has been used by many writers in the western world to describe the psychological attributes of social settings that satisfy group members' needs for belonging and meaning (e.g., McMillan & Chavis, 1986). Gusfield (1975) distinguished two major uses of the term community. The first covers the territorial and geographical aspects of the word, signifying for example, a neighborhood, town, or city. The second describes the more interpersonal and relational aspects of community, including the

“quality of character of human relationships, without reference to location” (Gusfield, 1975, p. xvi). McMillan and Chavis (1986), along the same lines, referred to territorial communities, for the first, more geographical meaning, and to relational communities, as the second. Accordingly, a sense of community is defined by McMillan (1976) as a feeling of belonging that members have, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together (McMillan & Chavis, 1986). In China, people pursue or maintain feelings of belonging to certain groups or organizations, such as their family, workplace or school, which is different from community (i.e., the smallest construct among town and city). Though where one lives groups Chinese people together territorially and geographically, it does not emphasize or require interpersonal connections. For this reason, inhabitants generally do not think significantly of their psychological belonging to where they live. However, in some more modern Chinese cities, such as Shanghai, people do regard personal interrelations with those where they live as important. Nevertheless, this is not the case throughout China, and as such when the basic psychological need for relatedness is discussed in this study, neither the word community is mentioned, nor the researchers who study community in the western world. In this study, the basic psychological need for relatedness discussed only uses the interpersonal meaning of community. The need for relatedness involves the need for feeling secure through connection with others in the environment and for considering oneself as worthy of love and respect (Osterman, 2000). Relatedness reflects the homonymous aspect of the integrative tendency of life, the tendency to connect with and be integral to and accepted by others (Deci & Ryan, 2002).

Human relationships are inextricably interwoven into the college environment through interactions with peers, advisors and faculty members. Heck and Weible

(1978) reported a correlation between supportive human relationships in the college environment and student retention. Goodenow (1993) suggests that experiencing a sense of belonging and of being supported in a particular context such as a school should enhance motivation and engagement in that context. Relatedness has also been linked to better academic performance (Battistich et al. 2004). If children acknowledge and regulate their behaviour towards those behaviours that are considered positive within the school environment, they will most likely feel securely connected to, and cared for by those endorsing such behaviour, (i.e., their parents and teachers) (Ryan et al. 1994). This internalization process should, in other words, help them meet their need for relatedness.

The influence of friends and peer groups on students' academic achievement and attitudes toward school has been widely noted (e.g., Brown, 1990; Coleman, 1961; Steinberg et al. 1992). Additionally, though Freeman (Freeman et al. 2007) examines the impact of students' perceptions that their interactions with their teachers are caring and supportive, he is unclear as to what degree students' perceptions of supportive, caring interactions with teachers continue to be important as they transition into college. According to Tinto (1987, cited in Freeman et al. 2007), contact with faculty members that are characterized as caring encounters is strongly related to positive academic outcomes. Bloom (1975) emphasizes the need for faculty members to be responsive to the student as an individual about his/her particular strivings, competencies, and short-comings in their encouragement, approval, and evaluation of his/her work.

Bennett (1952) emphasizes the value of those college support services that are associated with helping students feel they "belong" and are respected by their peers.

For example, belongingness and status depend on opportunities to share experiences and the willingness and ability of individuals to give and receive mutual support (Bennett, 1952). The university setting is characterized by many activities that may afford measures of the relationship between the individual and the group (Heck & Weible, 1978).

Supporting relatedness enhances motivation in general but will enhance intrinsic motivation and integrated internalization only if the others involved are autonomy supportive (Grolnick & Ryan, 1989). The more involved and autonomy-supportive parents and teachers are with their children or students, the more self-determined their children or students will be (e.g., Grolnick & Ryan, 1989; Grolnick et al. 1991).

Autonomy/ Self-determination

Autonomy refers to a state in which the “self rules”, the self is the perceived origin or source of one’s own behaviour, and thus is acting from interest or integrated values or goals (deCharms, 1968; Deci & Ryan, 1985; Ryan & Connell, 1989; Ryan & Powelson, 1991; Deci & Ryan, 2002). When individuals are autonomous, they experience their behaviour as an expression of the self and the “locus of causality” of the behaviour is internal, even though their behaviours may be extrinsically motivated (Deci & Ryan, 2002; Ryan & Powelson, 1991, p. 52).

Deci and Ryan (1991) describe the autonomy-supportive context as providing choice, minimizing pressure to perform in specified ways, and encouraging initiative. According to Self-Determination Theory, the more autonomy-supportive the social context, the more it facilitates the internalization and integration of extrinsic

motivation thereby supporting the satisfaction of basic psychological needs (Deci et al. 2006). For example, teachers are autonomy-supportive of students when their teaching considers students' perceptions and needs (Deci & Ryan, 1991). Deci and his colleagues (Deci et al. 1994) constructed a laboratory experiment presenting three factors that facilitate teachers' provision of autonomy-supportive learning, namely providing a meaningful rationale, acknowledging students' feelings (i.e., about the difficulty of their learning tasks), and conveying choice. They found that when the social context supports autonomy, integration tends to occur (i.e., self-determined behavioural regulation), whereas when the context is not autonomy-supportive, introjection occurs (i.e., non-self-determined behavioural regulation). In other words, given that basic psychological needs facilitate the internalization process, these results imply that in an autonomy-supportive social context, the basic psychological needs of competence or relatedness facilitate self-determined extrinsic motivation (i.e., integration). If the social context is not autonomy-supportive, basic psychological needs facilitate non-self-determined types of extrinsic motivation (i.e., introjection). Various studies provide support for this reasoning. Williams and Deci's (1996, cited in Deci & Ryan, 2002, p. 20) longitudinal study provides evidence suggesting greater internalization of bio-psychosocial values and practices among medical students whose instructors were more autonomy-supportive. Grolnick and Ryan (1989) found greater internalization and integration of school-related values among children whose parents were more supportive of autonomy and relatedness.

The term *self-determination* (Deci & Ryan, 1985; 1987) is interchangeable with the term *autonomy* because the former conveys the idea of autonomy in terms of the origin of actions and in transforming external regulations into self-regulation (Meissner, 1981 cited in Ryan & Connell, 1989; Ryan & Powelson, 1991, p. 52).

Because this study examines which university environmental factors facilitate internalizations, which involves exploring how the impacts of these factors on internalization are mediated by implied basic psychological needs, the term *autonomy* is used. The term *autonomy* is thus used in this study when exploring whether or how the university environment supports the origin of these undergraduates' behaviour. *Self-determination* is used when this study discusses how individual undergraduates are motivated to regulate their participation in various university activities or academic courses by transforming external regulations into self-regulation.

As mentioned previously, Deci's (1975) concept of self-determination derives from White's (1959) arguments regarding organisms' innate motivation to interact effectively with their environment through self-determined behaviour. White (1959) defines this motivational propensity as *effectance motivation*. This sort of motivation does not require any drive-based reinforcement in order for the individual to interact competently with the environment (Connell & Ryan, 1987, p. 65; Deci & Ryan, 1985, p. 5, 32). Self-determination is expressed by the need for self-determined competence in terms of White's (1959) conceptualization of effectance motivation. Social utility provides a factor impacting on self-determined behavioural regulation; it has been proposed as the reason why people internalize some and not all values and regulatory behaviours (Deci & Ryan, 1985, p. 137).

The self-determined functioning emphasized by SDT requires the development and exercise of extrinsic motivation and behavioural self-regulations, and is thus associated with personality development (Ryan et al. 1997; Deci & Ryan, 1985, p. 38). The positive consequences of a self-determined personality are revealed in various

studies conducted by Deci (Deci et al. 1989) and others. For example, being self-determined can lead to enhanced creativity (Amabile, 1983), promote conceptual learning (Benware & Deci, 1984), develop self-esteem (Deci et al. 1981), and general well-being (Langer & Rodin, 1976). The current study examines whether and how Chinese undergraduates are self-determined in their participation in university activities and academic courses, on the basis of the regulations and values they internalize and how these are incorporated into their integrated goals.

The term *integrated goals* implies external, societal goals that have been adopted by the individual to become personal goals (Deci & Ryan, 1985, p. 156). These goals, provided either by the self or by significant others, are considered important for the individual to endorse because of their outcomes and social utility (Deci & Ryan, 1985, p. 137). Integrated goals initiate people's self-determined motivation. Only when people are motivated by integrated goals are they self-determined to initiate and regulate their behaviour (Deci & Ryan, 2002, p. 17). In other words, self-determined behaviours are initiated and regulated by choices made on the basis of awareness of one's organismic needs as well as one's integrated goals (Deci & Ryan, 1985, p. 149).

Choice is key to the type of behavioural regulation initiated by integrated goals. Individuals must experience a sense of choice or freedom of volition in order to feel self-determined (Deci & Ryan, 1985, p. 155). This freedom is necessary both in terms of choosing those goals that are integrated but also in the behaviours used to fulfil those goals (Deci & Ryan, 1985, p. 155). Making flexible choices is thus involved in autonomy orientation (Deci & Ryan, 1985, p. 156). Autonomy-oriented people actively interact with their environments, seeking out events that may be interpreted as informational and aid in the fulfilment of integrated goals (Deci & Ryan, 1985, p.

153). In other words, autonomy-orientation is internal to the individual, whereas external environments can be interpreted as autonomy-supportive. The autonomy-oriented individual, the Chinese undergraduate in this study, will search their environment for informational events that support their autonomy and promote competence (Deci et al. 1989), and this maximises their potential for self-determined behaviour. This study does not attempt to categorize these undergraduates' types of causality orientations in predicting undergraduates' practice of self-determined and extrinsic motivations because Self-Determination Theory does not classify people as types of autonomy, controlling or impersonal oriented but agrees that people share some characteristics of each causality orientation (Deci & Ryan, 2002, p. 154). This study does not assess the degree to which people are oriented in each of the three ways quantitatively neither, which is in order to use the strength of the relevant orientation (or a combination of orientations) in predicting various behaviours, cognition, and affects (Deci & Ryan, 2002, p. 154). This study assumes that behaviours regulated through integrated goals are endorsed by people whose internal events share some characteristics of autonomy orientation.

2.5.2.3 Interpreting Informational/Non-Informational Events in an Autonomy-Supportive/ Non-Autonomy-Supportive Environment

People whose behaviour is regulated through motivation to fulfil integrated goals can be said be self-determined, which leads individuals to engage in activities that develop their competencies and help them work toward a flexible accommodation with their social environment (Deci & Ryan, 1985, p. 38). Being self-determined can

be said to share some of the same characteristics of being autonomy-oriented. Self-determined functioning involves actions that are chosen on the basis of one's integrated goals and self-determined extrinsic motivation is facilitated by the interpretation of environmental events as informational. Perceiving informational events that indicate the environment is autonomy-supportive promotes the regulation of individuals' self-determined behaviours toward the fulfilment of their integrated goals (Deci & Ryan, 1985, p. 151). In sum, people are motivated to accomplish their integrated goals, and their self-determination to do so is influenced by perceiving the environment as possessing a high degree of autonomy support. Therefore, the two requisite conditions for self-determined extrinsic motivation are people's self-determined behaviours to fulfil their integrated goals and interpreting the environment as autonomy-supportive based on its provision of informational events. As the basic psychological needs for competence and relatedness facilitate self-determined extrinsic motivation, they mediate this relationship and thus are also dependent on these two requisite conditions.

Studies have provided examples of how informational events are interpreted to characterize autonomy-supportive environments. Deci et al. (1989) reviewed that optimal challenge (Deci & Ryan, 1985), choice (Zuckerman et al., 1978) and positive feedback (Blanch et al. 1984; Deci, 1971) tend to be experienced as informational events suggesting the environment is autonomy-supportive, whereas negative feedback (Deci & Ryan, 1985), task contingent rewards (e.g., Ryan et al. 1983), deadlines (Amabile et al. 1976), and surveillance (Lepper & Greene, 1975) tend to be experienced as controlling.

For example, Zuckerman (Zuckerman et al. 1978) conducted a study to examine

whether choice supported self-determination in performance. He divided 80 undergraduates from the University of Rochester into 40 pairs working on the same activity. One member of each pair chose the activities to work on and how long to spend on them, while the other member was assigned these activities and times chosen. Task-choice subjects indicated greater feelings of control than no-choice subjects, and those subjects who controlled puzzle choice and duration on the task displayed greater intrinsic motivation than no-choice subjects. The study thus showed that choice did play a role in supporting self-determined performance.

Deci (1971) conducted two laboratory experiments and one field experiment to examine how the introduction of external rewards impacted on students' intrinsic motivation on an activity. He measured intrinsic motivation by measuring the time participants spent on concentrating on the task, and found that introducing an external reward of money decreased intrinsic motivation, whereas the external rewards of verbal reinforcement and positive feedback increased intrinsic motivation.

Lepper and Greene (1975) examined how surveillance and expected extrinsic rewards impacted on task performance. One group of subjects were allocated to the surveillance condition and another group was allocated to a non-surveillance condition. The former group of children was filmed by a video camera, and were told that they would be filmed. Study participants were also grouped into those who expected an extrinsic reward and those who had no expectation of a reward. The study found that participants who expected an extrinsic reward showed less interest in the activity than those who had no expectation of an extrinsic reward. Those under surveillance also showed less interest than those who were not monitored. Thus expectation of an extrinsic reward and surveillance are considered as controlling, and

thus undermining self-determined behaviour.

Critically, positive feedback, performance contingent rewards and limit setting can be either informational or controlling depending on the context (Ryan, 1982; Ryan et al. 1983; Koestner et al., 1984). When parents, teachers or managers understand and acknowledge an individual's needs, feelings and attitudes regarding a specific issue or situation, this promotes the individual's self-determination. The strong influence of the interpersonal context results in support for relatedness also facilitating competence. Osterman (2000) argues that supportive relationships facilitate the psychological experience of self-determination, and in turn the development of the sense of relatedness. When the need for relatedness is satisfied by autonomy-supportive personal relationships, the individual's internalization process is more likely to be promoted by adopting socially acceptable behaviours, especially in the classroom (Osterman, 2000). Kagan (1990) and Battistich et al. (1991; 1995) find that high demands for compliance, combined with low concern for a child's needs characterizes negative relatedness, and is associated with low social competence. In sum, environmental circumstances that support autonomy and feelings of acceptance and competence support internalization by providing informational events (Deci & Ryan, 1985, p. 146).

How these informational events function is dependent on how individuals interpret autonomy support in the environment. Field (Field et al. 2003) conducted in-depth interviews to examine the environmental factors that promote autonomy and facilitate the self-determination of students with learning disabilities in the postsecondary educational context. These factors include institutional infrastructure, information access, availability of social support systems, and accessibility of faculty. These

environmental factors support self-determination because they are interpreted as providing self-determined role models, self-determined skill instruction, opportunities for choice, positive communication patterns and relationships, and the availability of support (Field & Hoffman, 1994; 1996 cited in Field et al. 2003). These environmental factors are similar to the informational events that support self-determination in Self-Determination Theory.

Until 2003, the bulk of research and development in supporting self determination by providing an autonomy-supportive environment was conducted in secondary school settings (i.e., high school and middle school) (Field et al. 2003). Field et al. (2003) conducted their research qualitatively in the postsecondary special education context. Even though special education is not considered in this study, Field's (Field et al. 2003) research legitimates the feasibility of qualitative research, namely interviews, in examining the environmental factors that support students' self-determinations, in contrast to most SDT research, which is conducted quantitatively (e.g., Deci, 1971; Lepper & Greene, 1975; Zuckerman et al. 1978; see also section 2.1 above). In addition, Field's research (Field et al. 2003) provides a more complex view of the impacts of environmental factors on self-determined behaviour by examining specific characteristics of these factors, in much the same way as informational events operate within environmental factors in SDT.

In addition to autonomy-supportive environments and the informational events within them, Field's (Field et al. 2003) study considers the importance of satisfying basic psychological needs in order to facilitate internalization. Fulfilling the need for relatedness can come through positive communication patterns and supportive personal relationships (Field et al. 2003). Grolnick et al. (1991) and Vallerand et al.

(1989 cited in Deci et al. 1991) have also identified links between identified self-regulation and the basic psychological need for competence in regular, as opposed to special education. The previously mentioned studies that examine the interpretation of informational events and the facilitation of self-determination by environmental factors fail to indicate how self-determined people express and value their integrated goals. In other words, these studies fail to consider the context or social utility of individuals' integrated goals, and they do not illuminate how basic psychological needs mediate the impact of autonomy-supportive environmental factors on motivation.

The expression of integrated goals initiates people's internalization processes and is culturally-dependent. Consequently, the basic psychological needs that mediate the impact of environmental factors on the process of internalization are also culturally-dependent (Deci & Ryan, 1985; 2002). Even though these needs are universal and persistent throughout development, according to their definitions within the framework of SDT, the factors influencing them vary based on the culture in question. Thus, the factors influencing the satisfaction of these needs depend on the "demands, obstacles and affordances" within the social context of that specific culture (Ryan & Deci, 2000). How people satisfy their basic psychological needs is thus also dependent on the values and goals of that culture (Deci et al. 1991; Valery et al. 2003). Thus the Chinese university and especially its wider cultural context will influence how undergraduates express and satisfy their needs.

In summary, support for the fulfilment of the basic psychological needs of competence and relatedness will enhance integrated internalization only if it is administered in an autonomy-supportive way (Ryan, 1982; Grolnick & Ryan, 1989;

Deci et al. 1991). Becoming self-determined, the ideal outcome of the internalization process, depends on several factors. Firstly, the environment must allow the individual to experience a perceived high degree of autonomy. This occurs when the individual identifies and values the reasons for carrying out a given task, and regulates their behaviour as a result of these reasons. Carrying out this task successfully thus becomes an integrated goal. If all of these previous steps are in place, the basic psychological needs for competence and relatedness will facilitate the accomplishment of this integrated goal, thereby completing the process of internalization, the individual can then be said to be self-determined (Deci & Ryan, 1985, p. 146; Vallerand et al. 2008, p. 257). To the extent that the social context is *not* autonomy-supportive, by failing to provide informational events, the individual might not identify or value the reasons for carrying out a task, and thus regulate their behaviour within this controlled environment, exhibiting introjected or external behavioural regulation. As a result, these goals are not integrated, though they can still be mediated by relatedness, competence, or self-determination. Consequently, the individual can satisfy their basic psychological needs in this manner but their internalization will not be considered as resulting in the ideal outcome of self-determination (Deci et al. 1991; Deci et al. 1994; Deci & Ryan, 2002).

This study examines how Chinese undergraduates express their self-determination. Specifically, it looks at how these students pursue their integrated goals by participating in various university activities or academic courses. It also examines how these undergraduates' basic psychological needs mediate the impact of environmental factors and the extent to which these are perceived to be autonomy-supportive. Thus, the research questions in this current study are conducted:

1. What are the integrated goals Chinese university undergraduates possess for their self-determined and extrinsically motivated participation in various university activities or academic courses?
2. How do implied basic psychological needs of competence and relatedness mediate the impact of university environmental factors on Chinese undergraduates' self-determined and extrinsic motivation to engage in various university activities or academic courses?
3. If the university environment is not interpreted as being autonomy-supportive by the Chinese university undergraduates, how do implied basic psychological needs of competence and relatedness facilitate these undergraduates' process of internalization in their activity and course participation?

Chapter 3 Methodology

3.1 Research Rationale

3.1.1 Critical Realist Ontology and Epistemology

The ontology, epistemology and methodology of this study are guided by the philosophical position of critical realism (e.g., Willig, 1999). Roy Bhaskar (cited in Archer et al., 1998) is commonly considered the original and most influential theorist within critical realism, especially for his work on “transcendental realism” which examines scientific practices, and “critical naturalism”, which looks at human sciences (Collier, 1994). The nature of external reality, or ontology, within critical realism is stratified, structured, and changing (Danermark et al., 2002, p. 10). Stratification signifies that mechanisms differ depending on which level of reality they belong to (Danermark et al., 2002, p. 59). This is reflected in the differentiated aspect of critical realist ontology, which implies that reality consists of objects with qualitatively different powers and mechanisms (Danermark et al., 2002, p. 21). As a result, critical realist epistemology maintains that knowledge about reality is always fallible (Danermark et al., 2002, p. 10). In order to appropriately define and explore the mechanisms, the critical realist researcher must clearly define those strata of the reality that are to be considered in their study. Mouzelis (1995) argues that social strata can be studied using a psychological perspective, as is done in this study of

Chinese students within a university context.

Critical realism emphasizes how individuals make meaning of their experiences, the ways the broader social context impinges on these meanings, and also the material and other limits of “reality” (Braun & Clarke, 2006, p. 81). Critical realism maintains that reality exists independently of our knowledge of it and that we must perceive processes in their natural operational context within the world if we want to investigate the underlying mechanisms (Danermark, et al., 2002, p. 20). This study investigates the process of Chinese undergraduates’ ongoing participation in various activities and academic courses at Tianjin Foreign Studies University (TFSU). The underlying mechanisms to be investigated are the basic psychological needs facilitating the internalization processes taking place. These were assessed in acknowledgment of how the environmental factors of both the university and the wider social and cultural Chinese context might impact on students’ internalization process. The investigation is carried out in line with the assumption within Self-Determination Theory that personal development towards self-determination emerges by actively contending with the environment (Deci & Ryan, 1985, p. 114). In this sense, the phenomenon under study is most appropriately investigated using the ontological and epistemological context of critical realism. How individuals make meaning of their experiences of self-determined participation in university activities and academic courses is assessed through interviews with students. The underlying generative mechanisms are accessed by deriving their basic psychological needs as implied through their interview responses, and through this, the relationships between students’ experiences, their underlying psychological processes, and the external environment are examined.

3.1.2 The Reasons for Adopting Case Study

Critical realism is a metatheory (Danermark et al., 2002, p. 118), and thus breeds different methodological decisions. Given that the research question guiding this study is a “how” question (e.g., how do basic psychological needs for competence and relatedness mediate the environmental factors of a Chinese university on students’ motivation to participate in various activities or academic courses?), this study adopts a case study approach. Case study is considered the preferred strategy for answering explanatory “how” research questions (Yin, 1994, p. 6). Case study does not require control over behavioral events and it focuses on contemporary events (for more information, see Yin, 1994, p. 6). Given the focus of the current study on social and environmental factors, this consideration of contextual conditions renders using a case study approach both useful and highly relevant (Yin, 1994, p. 13).

Case study is considered a research tool (e.g., Hamel, 1992; Perry & Kraemer, 1986), and has commonly been employed as a research strategy in psychology (Yin, 1983). Case studies investigate a contemporary phenomenon within its real-life context, and rely on multiple sources of evidence (Yin, 1994, p. 13; Robson, 2002, p. 178). Drawing on multiple sources of evidence such as interview transcripts, observation records, or document analysis, case studies enable the intensive investigation of the case “in-depth, to probe, drill down and get at its complexity (Ashley, 2012, p. 102)”. In fact, a concern that should underlie case study data collection and analysis is how to achieve in-depth understandings of unique, individual cases, given that this uniqueness implies individuals’ “meanings (of experience) in context” (Noblitt &

Hare, 1988, p. 17).

3.1.3 Research Inferences

Inferences guided by critical realist principles advance the study of social phenomena towards phenomena conceptualization and social knowledge abstraction through generative mechanism exploration. In addition to deduction and induction, the more traditional offerings in terms of methods of inference in the natural and social sciences, abduction and retroduction are the biggest critical realist contributions to inference development. Abduction involves providing new insights as an outcome of interpreting or explaining phenomena with the help of general concepts and theories constructed by previous research (Danermark et al., 2002, p. 113). This study uses abductive reasoning because the context (i.e., the Chinese university) is a new one and can therefore provide insights, when its interpretation is guided by previous constructs (e.g., Self-determination Theory). Using retroductive inference, the researcher clarifies the basic prerequisites or conditions for social relations, actions (i.e., social or human activities), reasoning, and knowledge (Danermark et al., 2002, p. 113). Danermark and colleagues (Danermark et al., 2002, p. 97) clarify retroductive inference using an example:

How is any phenomenon, like an action or a social organization, possible?

If we call this phenomenon X, we may formulate our question thus: what properties must exist for X to exist and to be what X is? Or, to put it more briefly: what makes X possible?

(Danermark et al., 2002, p. 97)

The social scientist, adhering to critical realist principles, infers their research conclusions firstly by re-describing and re-contextualizing the phenomenon under study using general concepts and theories from previous research, and secondly by then trying to reconcile or abstract accidental circumstances (if these exist) and the phenomenon in order to uncover the generative causal mechanisms underlying that phenomenon. In this study, abductive inference is used to reconcile and abstract the expression of basic psychological needs to the Chinese social context, which is different to contexts previously investigated. In addition, this study retroductively infers from these expressions what properties must exist for basic psychological needs to facilitate Chinese undergraduates' self-determined and extrinsic motivation to participate in various university activities or academic courses.

3.2 Research Design

There are five components of a case study research design that are especially important: its questions; its propositions, if any; its units of analysis; the logic linking the data to the propositions; and the criteria for interpreting the findings (Yin, 1994, p. 20). Case study benefits from the prior development of theoretical propositions to guide data collection and analysis (Yin, 1994, p. 13). The purpose of a case study is to develop or to test theory, and the complete research design embodies a "theory" of what is being studied (Yin, 1994, p. 31). In terms of multiple case studies, a

previously developed theory is used as a template with which to compare the empirical results of the case study (Yin, 1994, p. 31). If two or more cases are shown to support the same theory, replication may be claimed (Yin, 1994, p. 31).

Danermark et al. (2002, p. 23, 33) postulate that social phenomena cannot exist without some form of human activity. In turn, the contents of everyday knowledge constitute the immediate mechanisms behind the activities that make up social phenomena. This study not only examines undergraduates' experiences of being motivated to participate in activities and academic courses but also how undergraduates' everyday knowledge provides an insight into the psychological mechanisms underlying these experiences.

Critical realism, which guides this case study, advocates that case studies should be conducted in an open system. This open perspective is manifested in asking undergraduates to name various activities or academic courses as they are describing their experiences rather than having the researcher generate such a list. This is thus different to Ryan and Connell (1989), who examined the model of Perceived Locus of Causality (PLOC, Heider, 1958) based on students' self-reported reasons for engaging in typical academic behaviours using a more closed system. The system in their study can be considered closed because Ryan and Connell surveyed a small number of elementary school teachers to generate typical academic behaviours. From these categories, they selected some that they would ask students about, such as doing homework, working on coursework, trying to answer questions in class and the global issue of trying. By generating these categories from the teachers, rather than the students themselves, who actually possess the motivational reasons for examining the PLOC model, Ryan and Connell risked missing those behaviours that students are

self-determined to participate in or engage with from their own perspectives rather than from their teachers' perspectives. That risk is not taken in the current study, which values directly accessing the self-determined motivation of students, and therefore distinguishes students' self-determined motivation from their non-self-determined motivation. In this sense, the use of case study in the current study permits the exploration of students' motivation within an open system, unlike Ryan and Connell (1989). Analyzing an open system requires that researchers acknowledge differences in relationships among mechanisms, given that generative mechanisms operate in a complex interaction with other mechanisms, either cooperating with or working against the causal mechanism in question (Danermark et al., 2002, p. 199).

Case study as a research strategy is not limited to "qualitative research" (see Strauss & Corbin, 1990), because it can be based on a mix of quantitative and qualitative evidence (Yin, 1994, p. 14). The methods used in this study are semi-structured interviews and a questionnaire survey.

The quantitative questionnaire survey was designed first, and responses to it are expected to provide the statistical data for uncovering the relationships between undergraduates' perspectives of the *actual* university environment and their *desired* university environment, their self-determinations and implied basic psychological needs. Undergraduates' perspectives of the actual university environment and their desired university environment are measured by the Student Adaptation to the School: Real and Desirable School Environment Questionnaire (Heck & Weible, 1980). In terms of this quantitative research design, Perceptions of basic psychological needs are measured using the Basic Psychological Needs in General Scale, whereas

self-determination is measured by the Self-determination Scale (SDS) (Sheldon & Deci, 1996). These scales were used in order to examine whether differences between undergraduates' perceptions of the actual and desired university environment might influence the satisfaction of their basic psychological needs, and their self-determinations.

Semi-structured interviews form the second part of data collection, and allow for the examination of individuals' unique experiences within an open system. The semi-structured interviews are instructed by the conceptual framework and propositions of SDT, as elaborated in Section 3.2.1 below. The questions guiding the semi-structured interviews were developed by the researcher, and can be found in Section 3.2.2. Section 3.2.3 outlines the definition of units of analysis and the sampling process for the semi-structured interviews. The logic linking interview data to the SDT propositions are clarified in Section 3.2.5. Section 3.2.6 presents the criteria for interpreting the findings, followed by Section 3.3, which describes the protocol that was used in conducting the interviews in the Chinese university. Finally, Section 3.4 addresses the ethical issues arising from the use of semi-structured interviews.

This mixed research design attempts to appreciate the uniqueness of individual cases using qualitative and quantitative perspectives. However, the design was revised after reconsidering the feasibility of this study according to this research design (see Section 3.2.4).

3.2.1 Theoretical Propositions

It is essential to make clear any theoretical propositions prior to the collection of case study data (Yin, 1994, p. 30). The following theoretical propositions, drawn from Self-Determination Theory (SDT, Deci & Ryan, 1985; 2002), guide the current research:

Theoretical Proposition 1:

Only when undergraduates are self-determined and interpret the university environment as autonomy-supportive do their implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivation;

Theoretical Proposition 2.1:

When undergraduates are self-determined but do not interpret the university environment as autonomy-supportive, their implied basic psychological needs for competence and relatedness facilitate their non-self-determined and extrinsic motivation to participate in activities and courses rather than facilitating their self-determined and extrinsic motivation;

Or,

Theoretical Proposition 2.2:

When undergraduates are self-determined but do not interpret the university environment as autonomy-supportive, they are not motivated to participate in activities and courses;

Theoretical Proposition 3:

When undergraduates are not self-determined, they are neither motivated to accomplish their integrated goals nor participate in activities and courses.

The goal of research design is to provide strong guidance as to what data to collect and what strategies to use to analyze it. This guidance is informed by the aforementioned theoretical propositions. The data collected and the strategies for analyzing it should enable the study of both the phenomenon of interest and its wider context, as per the goals of case studies (Yin, 1994, p. 48). Therefore, these theoretical propositions were developed prior to data collection and analysis, and help to determine the direction and scope of the study (Miles & Huberman, 1994; Stake, 1995). In other words, these propositions provide directions about where to look for relevant evidence (Yin, 1994, p. 21), when these evidence is collected in an open system as forementioned.

This study examines the phenomenon of how undergraduates' basic psychological needs for competence and relatedness facilitate their internalization processes within a Chinese university context by mediating the impact of university environmental factors on their motivation to participate in university activities and academic courses. Critical realist ontology acknowledges the stratified and structured nature of external reality (Mouzelis, 1995), in which undergraduates' motivations, pertinent to this study, fall within the social strata, and more specifically, the psychological strata. Structures that provide "relevant evidence" (Yin, 1994, p. 21), both guided by these theoretical propositions and situated within the psychological strata of critical realist ontology consist of (see the relationships among these structures in Figure 2): 1) personal

factors that influence whether an individual is self-determined or not; 2) expressions of integrated goals; 3) environmental factors that are interpreted as being autonomy-supportive; 4) environmental factors that are interpreted as non-autonomy-supportive; 5) implied basic psychological needs for competence and relatedness that facilitate undergraduates' self-determined extrinsic motivations to participate in various university activities or academic courses; 6) implied basic psychological needs for competence and relatedness that facilitate undergraduates' *non*-self-determined extrinsic motivations to participate in various university activities or academic courses; 7) variations between whether undergraduates are self-determined to accomplish integrated goals through external or introjected regulations; 8) implied basic psychological needs for competence and relatedness that cannot facilitate undergraduates' self-determined regulations; 9) expectations of the university environment regarding self-determined regulations; and 10) consequences of being self-determined to accomplish integrated goals or not. These structures inform the questions posed to study participants and comprise "relevant evidence".

3.2.2 Developing Three Sets of Questions to Ask

One especially important component of case study design is deciding what questions are asked. This implies both the research questions directing the entire study, and the questions providing some structure to the interviews. Thus answering the latter helps answer the former. The overall study research questions are discussed in the Literature Review, and are relevant in defining how to test theory in this case study. In terms of the semi-structured interview questions, Chinese undergraduates are asked which

activities or academic courses they participate in, in order to examine whether the motivation for this participation can be considered self-determined or non-self-determined. For example, during the semi-structured interviews, study participants are asked: which university activities or academic courses would you like to participate in or are you interested in? The second question of the first set question is inspired by Ryan and Connell (1989), who studied children's reasons for participating in activities in two domains, academic achievement and pro-social behaviour, by posing "why" questions. Starting with informal one-to-one interviews with children, Ryan and Connell (1989) asked why the children engaged in each of the categories of behaviours on a list that was generated by a survey of a small number of elementary school teachers. According to the children's responses, Ryan and Connell (1989) developed four categories of reasons. These included three types of extrinsic motivation and one type of intrinsic motivation: external, introjected, identified and intrinsic, respectively. By distinguishing these types of extrinsic motivation, Ryan and Connell (1989) were able to identify self-determined extrinsic motivation from non-self-determined extrinsic motivation. The current study acknowledges this distinction and thus develops the second question of the first set asked into a "why" question. This is done in order to focus on self-determined extrinsic motivation to participate in various university activities or academic courses by distinguishing them from non-self-determined extrinsic motivations. The question posed is: why do you choose to or why would you like to take part in this activity or academic course? Obtaining an answer to this "why" question should help distinguish self-determined types of extrinsic motivation to participate in these university activities or academic courses from non-self-determined types of extrinsic motivations, and aid in the analysis of the mediating role of undergraduates' basic psychological needs in facilitating undergraduates' process of internalization.

The second question of the first set of semi-structured interview question asks undergraduates why they would like to or are motivated to participate in various university activities or academic courses, with the possibility that undergraduates may speak of external environmental factors as impacting on this motivation. This consideration of environmental factors reflects the methodological concern of case studies to cover both the phenomenon of interest and its context (Yin, 1994, p. 48). In addition, this consideration of environmental factors is informed by the aforementioned theoretical propositions that posit the significance of interpreting environmental factors as autonomy-supportive (see Theoretical Propositions 1-3, above). The question also allows for possible answers to indicate how environmental factors can be mediated by basic psychological needs such that these Chinese undergraduates are motivated to *not* participate in particular university activities or academic courses. This question will be asked in the second set.

The third set of questions asks: what are your expectations of the university environment for your personal growth according to your experience of participating in various university activities or academic courses? This set of questions aims to further explore the environmental factors operating within the university context, given that these may either facilitate the satisfaction of undergraduates' basic psychological needs, and their self-determined, extrinsic motivations or be interpreted as non-autonomy-supportive.

Together, this set of three questions examines how Chinese undergraduates' basic psychological needs mediate the impact of university environmental factors on their motivation. In particular, it examines their motivation to participate in various

university activities or academic courses by distinguishing self-determined extrinsic motivations from non-self-determined extrinsic motivations. The questions elaborated on in the semi-structured interviews are:

1. What kind of activities or academic courses interest you at this university/which university activities or academic courses would you like to participate in here? Why did you choose to or why would you like to participate in the activities or academic courses you have mentioned?
2. What kinds of activities or academic courses do not interest you at this university? Why did you choose not to or would you not want to take part in these activities or academic courses?
3. What are your expectations of the university environment for your personal growth according to your experiences of participating in various university activities or academic courses?

Using semi-structured interviews will enable the examination of undergraduates' experiences of being motivated to participate in various university activities or academic courses and expand on the responses to this set of three questions (Wellington, 2000). In other words, asking these questions in semi-structured interviews will allow study participants to really discuss in depth their motivational experiences. In this study, semi-structured interviews are conducted with twenty-eight participants, and the aforementioned questions are used to guide interviewees' story telling. Undergraduates' responses in the semi-structured interviews include stories about the circumstances surrounding their participation in specific university activities and academic courses and also which, and how, they perceive university environmental factors to influence their motivation. Story telling is central to the

semi-structured interview conversation, which produces a narrative regarding all or part of their interviewees' life-experience (Wengraf, 2001). The significance of storytelling will be discussed in Section 5.5 General Conclusion.

3.2.3 Semi-structured Interview Sampling: Unit of Analysis

Units of analysis are another of the most important components of case study research design (Yin, 1994). Miles and Huberman (1994, p. 25) postulated that “a case is, in effect, your unit of analysis.” However, that a case might be “representative” or “typical” is questioned by Thomas (2011, p. 31) who emphasizes that case studies are limited to “a particular representation given in context and understood in that context.”

Yin (2009, p. 54) suggests that multiple cases should be selected either because they are expected to lead to similar findings and conform to current theory, or because they are expected to lead to divergent findings for particular reasons and thus provide an exception to current theory. Given that this interpretive case study involves the examination of SDT within a new context, that of the Chinese university, it is difficult to predict whether the results will correspond to current theorizing or provide an exception. To an extent, this is dependent on the research design, and its focus on conducting research in an open system, even though the study overall is instructed by theoretical propositions adhering to SDT. Therefore, the strategy of selecting cases in a multiple case study is done with the aim to develop or test theory. In this way, a multiple case study can be used to replicate findings across cases (Baxter & Jack,

2008, p. 548). If similar results are obtained from all three cases, for example, replication, rather than sampling logic, is said to have taken place and the development of a richer theoretical framework is required (Yin, 1994, pp. 45-46). Accordingly, the theoretical framework needs to state the conditions under which a particular phenomenon is likely to be found (a literal replication) as well as the conditions when it is not likely to be found (a theoretical replication) (Yin, 1994, p. 46). In this study, the theoretical framework is presented in Figure 2 with the statement of two conditions: 1) undergraduates are self-determined to accomplish their integrated goals; 2) the university environment is interpreted as autonomy-supportive. Only when these two conditions exist at the same time can the claim of this study be tested. In other words, only when these two conditions exist can the undergraduates' implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivation to participate in various activities or academic courses. This theoretical framework leads to as research questions, and clarifying and specifying research questions result in the selection of the appropriate unit of analysis (Yin, 1994, p. 23).

The experience of the selected undergraduates who represent the cases in this study should be relevant to the current theoretical propositions. In this study, such relevant experience is that which concerns whether undergraduates are motivated to participate in various academic courses and activities or not. In fact, selecting those cases where undergraduates experience being thus motivated or not within this Chinese university context presents a way of binding a case, which means deciding which cases to include and exclude. Yin (2003) and Stake (1995) provide some suggestions on how to bind a case. These suggestions include choosing cases bound by: (a) time and place (Creswell, 2003); (b) time and activity (Stake, 1995); and (c) definition and context

(Miles & Huberman, 1994). In this study, case selection is governed by context. Year 3 undergraduates in the department of Educational Technology were excluded because nearly half participated in a student exchange programme in cooperation with Tianjin University of Chinese Traditional Medicine (TUCTM). Year 3 undergraduates spend their first two years in the department of Educational Technology at TFSU and then move to TUCTM for the two remaining years of their Bachelor degrees. In addition to being difficult to access, the Year 3 exchange undergraduates possess experiences within two different universities in China, making it difficult to isolate and identify the impact of any environmental factors particular to TFSU on student motivation. The remaining half of Year 3 Educational Technology undergraduates are excluded from this study due to limited sample size, namely forty, which is much fewer than the amount in the other years of study examined here. In smaller samples, it is difficult to obtain considerable variation (Cohen et al., 2007, p. 102), and as such a decision was made to exclude Year 3 students from the research sample.

Having defined the exclusion criteria, the next decisions surround the adoption of a suitable sampling strategy, which is significant in conducting academic research properly (Morrison, 1993, pp. 112-117). This interpretive case study applies convenience sampling, quota sampling and snowball sampling (e.g., Mertens, 1998, pp. 261-265; Cohen et al., 2007, pp. 113-116) as sampling strategies.

The convenience sample (Cohen et al., 2007, p. 114) selected for this study drew from a group of undergraduates who had experienced being involved in the Chinese university context at Tianjin Foreign Studies University (TFSU). The participants came from different years of study (i.e., Year 1, Year 2, and Year 4) and were studying in the department of Educational Technology, from which the current researcher

graduated with a Bachelors degree. TFSU was founded in 1964, and as one of eight Foreign Studies universities in China, it offers a number of language and cultural programs to Chinese and overseas students of various educational backgrounds. There are nearly 9,000 full-time students at the university, including 8,397 undergraduates and 546 postgraduates. Students originate from 28 different cities, autonomous regions and directly governed city regions in China. TFSU is a public university managed and supervised by the Ministry of Education of P. R. China. The university's department of Educational Technology was built in 2002 and endeavors to produce graduates skillful and knowledgeable in teaching, learning, designing, applying, managing and assessing programs, and performance in the fields of media, teaching, and long-distance education.

In order to obtain variation in the responses across the three years of study (i.e., Year 1, Year 2 and Year 4), quota sampling was carried out. A roughly equal number of students from each year were chosen for interview, and this allowed for the interview sample to show variations in the different year subgroups under study. Importantly, the use of quota sampling in this study was not carried out in order to compare and contrast how basic psychological needs mediate the undergraduates' motivation across the years, but to provide a representative sample (Cohen et al., 2007, p. 114) that reflects the significant characteristics of the wider population (i.e., Educational Technology undergraduates at Tianjin Foreign Studies University). In the department of Education Technology at TFSU, there are ninety-five Year 1 undergraduates, eighty Year 2 undergraduates, and eighty-two Year 4 undergraduates, providing a total sampling population of 259 undergraduates. Quota sampling was used in deciding which students and how many per eligible year would take part in the semi-structured interviews, resulting in a sample of eleven Year 1 undergraduates ($11/95 \times 100\% = 11.6\%$),

eight Year 2 undergraduates ($8/80 \times 100\% = 10\%$), and nine Year 4 undergraduates ($9/82 \times 100\% = 11\%$). Quotas across years are roughly equal, at 11.6%, 10%, 11% for Years 1, 2 and 4, respectively.

Snowball sampling (e.g., Cohen et al., 2007) is also applied as a sampling strategy in this study, in order to access potential semi-structured interviewees who have the characteristics of interest to this study. Snowballing is a method of expanding the sample by asking one informant or participant to recommend others for interviewing (Babbie, 1995; Crabtree & Miller, 1992). Chinese universities employ a group-based student management system, and often those who have classes together take part in university activities together (e.g., sports competitions), in addition to living in dorms together each year of their study (Tao et al., 2000, p. 126). Those who live together and spend much of their class and activity time together thus often become friends. Finding students to take part in the interviews often easily led to their group members. In addition, knowing that one individual was free, by examining the undergraduates' lectures and seminar timetables, provided an idea of when their group mates would also be available for interview.

28 undergraduates in total participated in the semi-structured interviews, which were run individually. Student numbers (i.e., F1, F2, F3, etc) are not University Student ID numbers but were given instead to provide anonymity and organize the data. These numbers are grouped with gender and year of study frequencies in Table 3.1 below:

	Student No.	Gender	Year of Study
	F1	Female	Year 1
	F2	Female	Year 1
	F3	Female	Year 1
	F4	Female	Year 1
	F5	Male	Year 1
	F6	Female	Year 1
	F7	Female	Year 1
	F8	Female	Year 1
	F9	Male	Year 1
	F10	Female	Year 1
	F11	Male	Year 1
Year 1 Subtotal		Male: 3; Female: 8	Year 1: 11
	S1	Male	Year 2
	S2	Female	Year 2
	S3	Male	Year 2
	S4	Female	Year 2
	S5	Female	Year 2
	S6	Female	Year 2
	S7	Female	Year 2
	S8	Female	Year 2
Year 2 Subtotal		Male: 2; Female: 6	Year 2: 8
	Fo1	Female	Year 4

	Fo2	Female	Year 4
	Fo3	Male	Year 4
	Fo4	Female	Year 4
	Fo5	Female	Year 4
	Fo6	Male	Year 4
	Fo7	Male	Year 4
	Fo8	Male	Year 4
	Fo9	Female	Year 4
Year 3 Subtotal		Female: 4; male: 5	Year 4: 9
Overall Total		Male: 10; Female: 18	28

Table 3.1 Frequencies of Interviewees by Gender and Year

3.2.4 The Logic Linking the data to the Propositions

Examining the logic by which data are linked to the theoretical propositions guiding a study represents one means of analyzing case study data, and is another of the five especially important components of case study research design (Yin, 1994). Yin (2003) notes that returning to the propositions when analyzing data is important in retaining the research focus especially if the data is outside the scope of the research questions and to be able to explore rival propositions, in order to provide an alternate explanation of a phenomenon. As propositions and rival propositions are addressed,

confidence in the findings is increased (Baxter & Jack, 2008).

In this study, thematic analysis is used to generate themes with structures of the phenomenon, in order to link the data to the theoretical propositions. Thematic analysis is a method for identifying, analyzing and reporting themes within data (Braun & Clarke, 2006, p. 79). Braun and Clarke (2006) consider thematic analysis a foundational method for qualitative analysis, and Boyatzis (1998) has suggested that thematic analysis is not a specific method but a tool that can be used across different methods, including case studies. Presentation of hierarchical themes helps to define and to develop the structures of the phenomenon under study. Thematic analysis can also be considered a “contextualist” method, implying that it fits within the greater theoretical framework of critical realism (e.g., Willig, 1999). The steps of generating themes and analyzing data by adopting thematic analysis will be discussed in the Data Analysis and Discussion chapter.

3.2.5 Research Design Analysis, Pilot Study and Revision to Research Design

The purpose of research design analyses and pilot studies is to confirm the feasibility of methods that will be used in data gathering. This can test if the chosen approach is feasible, and potentially uncover problematic areas that should be addressed prior to commencing the research. During this process, difficulties in obtaining the expected results through SPSS analysis of the quantitative questionnaire data became apparent. It was difficult to obtain a statistical relationship between differences in perceived and desired university environment and students’ implied basic psychological needs and

degree of self-determination. In other words, it was difficult to define statistically whether differences in perceived and desired university environment resulted in the satisfaction of students' basic psychological needs. In addition, it was difficult to define statistically which and how specific university environmental factors impacted on the satisfaction of different basic psychological needs. Inability to define which university environmental factors impact on the satisfaction of different basic psychological needs in turn makes it difficult to provide recommendations for how universities can improve their offerings in terms of satisfying students' basic psychological needs. Accordingly, it is difficult to provide recommendations as to how to develop undergraduates' internalization processes, which result in self-determination, as this is dependent on the mediation of environmental factors by basic psychological needs. As a result of these difficulties, the quantitative questionnaire was removed from the larger study programme.

There were four main reasons for conducting three pilot semi-structured interviews targeting one Year 1 undergraduate and two Year 4 undergraduates. Firstly, these pilot interviews would provide an estimate of how long each interview would take, in addition to the time spent checking the dates and times the undergraduates were free. In terms of estimating the potential duration of each interview, the interviewer found that the interview with the Year 1 interviewee lasted twenty-two minutes and eight seconds, and that the interviews with the two Year 4 undergraduates lasted thirty-two minutes, one second and fifteen minutes, twenty seconds, respectively. Therefore, the interviewer estimated that each of the main study interviews would take between ten to thirty-five minutes. The interviewer thus allocated an hour to each subsequent interviewee, including time for the interviewees to read and sign the consent form and ask questions about the interview or study more generally. Secondly, the pilot

interviews were conducted in order to determine the best location for later interviews. The interview location needed to be quiet enough so that the interviewer and the interviewee could concentrate on the conversation and not be disturbed by others, but also isolated enough so that their conversation did not disturb others. A quiet interview location also meant that interviews could be recorded clearly. Thirdly, these three pilot interviews served to ensure the interview questions that had been prepared in advance were suitable. For example, the pilot interviews sought to determine whether the undergraduates had any trouble understanding the interview questions and if there was anything in particular the interviewer needed to explain to the interviewees about the study or the interview questions. The last reason for the pilot interviews concerned the necessity and significance of using semi-structured interviews in terms of probing the uniqueness of meanings presented by participants' experiences. Study participants have opportunities to tell their stories by answering the semi-structured interview questions about whether their motivation to participate in various university academic courses is self-determined or not, and about how they interpret the university environment in terms of whether it is conducive to their growth and development. In particular, as these participants describe their experiences, which and how university environment factors impact on the satisfaction of implied basic psychological needs becomes clearer. As the quantitative questionnaire results failed to provide evidence legitimating which and how university environment factors impact on the satisfaction of implied basic psychological needs and students' self-determinations, the research design was thus revised from a mixed research design to semi-structured interview dominant.

As the semi-structured interviews became the only data resource, the case study thus became an entirely qualitative rather than quantitative study. Accordingly, it needed to

be legitimated according to the critical perspective, research questions and theoretical framework of SDT guiding the study (for more details, see Literature Review).

Firstly, a qualitative approach can explain an outcome in terms of particular cases, using mathematical logic to analyze necessary and sufficient causes (Mahoney & Goertz, 2006, p. 229). In this study, the expected outcome was that Chinese undergraduates' implied basic psychological needs for competence and relatedness would facilitate their self-determined and extrinsic motivations to participate in various university activities and academic courses. This was theorized to be reliant upon two necessary conditions: interpreting the environment as autonomy-supportive and being self-determined to accomplish one's integrated goals. Using a qualitative approach can and has provided a meaningful causal explanation of the outcome in terms of these two necessary conditions. Particularly, compared to the quantitative research methods that have previously been adopted within the SDT framework, the qualitative approach this study adopts is able to discern the salient environmental factors in a particular situation, show how these foster the satisfaction of participants' implied basic psychological needs, and indicate how this then facilitates the process of internalization.

Secondly, a predominantly qualitative approach works when used in this study because the arguments in the SDT framework are understood in line with critical realism (for more details, see Research Rationale, Section 3.1). Critical realism emphasizes how individuals make meaning of their experiences, the ways the broader social context impinges on these meanings, and also the material and other limits of "reality" (Braun & Clarke, 2006). The use of interpretive case study best answers the questions guiding the current research due to its ability to highlight how Chinese

undergraduates make meaning of their experience of participating in various university activities and academic courses and the ways the wider Chinese social context impacts on and influences these meanings. Case study provides opportunities to cover contextual conditions (i.e., environmental factors within this Chinese university that are interpreted as autonomy-supportive vs. non-autonomy-supportive), which may be highly pertinent to the phenomenon of study (i.e., how basic psychological needs facilitate motivation) (Yin, 1994, p. 13).

3.2.6 Criteria for Interpreting the Findings

The criteria for interpreting the findings represent the validity and reliability of this study. Validity refers to whether conclusions or explanations derived from research data are true and accurately capture what is really happening (Gibbs, 2002). It is impossible for qualitative researchers to be entirely objective (e.g., Crotty, 1996; Schutz, 1994) given that each person's values are influenced by factors including personality, socioeconomic status, and culture (e.g., Burkitt, 1997; Colaizzi, 1978; Porter, 1993). "Researchers' historical situatedness of inquiry, a situatedness based on social, political, cultural, economic, ethnic and gender antecedents of the studied situations" influences what they bring to a narrative (Creswell & Miller, 2000, p. 127).

Critical perspectives require researchers to be reflexive and disclose what they bring to a narrative in order for their study to obtain validity (Creswell & Miller, 2000, pp. 126-127). In particular, self-disclosure and collaboration with participants can help.

Self-disclosure, or reflexivity, means that the researcher critically engages and reports on their own personal beliefs, values, and bias, while individual participants reflect on the social, cultural and historical forces that shape their stories and interpretation (Creswell & Miller, 2000, pp. 126-127). This is important given the power of the researcher on influencing the research findings, and is addressed through providing interpretive comments throughout the discussion of the participants' interpretations and in the research conclusions (Creswell & Miller, 2000, p. 127). These interpretive comments and discussion are presented in the Data Analysis and Discussion chapters. Evidence of how participants shaped their interpretations is through the presentation of quotations from the raw data and contributes to the credibility, or trustworthiness, of this case study (e.g., Koch, 1994). The quotations from the raw data are the participants' own reflections, and conveyed in their own words (Patton, 2002 cited in Fereday & Muir-Cochrane, 2006). As the researcher makes the decision to include which quotation, the presentation of these quotations reflects the researcher's interpretive comments.

Internal validity and external validity are both required in case studies. Internal validity provides the confidence that the cause did have an effect, and serves to validate proposed causal relationships (Yin, 1994, p. 35). In this case study, the causal relationship exists in term of the two requisite conditions, namely that 1) undergraduates are self-determined to accomplish their integrated goals; and that 2) these undergraduates interpret the university environment as autonomy-supportive. Only when the two requisite conditions exist at the same time, it is posed, can undergraduates' implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivations to participate in various activities or academic courses. Otherwise, undergraduates' implied basic

psychological needs for competence and relatedness facilitate their non-self-determined, extrinsic motivation or amotivation. The causal relationship between these conditions and their potential results is theoretically based in SDT and as such, the internal validity of the study comes through the clarification of this theoretical basis and its propositions and assessing, in the data analysis and interpretation, the correspondence of data collected from multiple, thus replicated, cases. Case studies obtain external validity by achieving “analytic generalization” (Yin, 1994, p. 36). In order to achieve this, an attempt should be made to generalize findings to “theory” rather than from one case to another (Yin, 1994, p. 37). A “theory” must be tested through replications of the findings through cases with replication logic (Yin, 1994, p. 36).

The goal of reliability is to minimize the errors and bias in the study (Yin, 1994, p. 36). The reliability of the entire case study is increased by building the database (Yin, 1994, p. 95). Building a database, which is distinct from the case study report, helps other investigators review the evidence of case study directly and aid in replicating the procedures to see whether they arrive at the same results (Yin, 1994, p. 37, 95). Therefore, records have been kept of all the different versions of translation from Chinese transcripts, data analysis records (for examples, see Appendices), which chart the generation of themes in the thematic analysis, and invariant meaning units of the experience (for examples, see Appendices). As other investigators read through these records, they can access the story and steps involved in how the study was conducted, data analyzed, and conclusions reached. In this manner, a chain of evidence is presented, which provides other investigators with the opportunity to “follow the derivation of any evidence from initial research questions to ultimate case study conclusions” (Yin, 1994, p. 98). In addition, the research design, methodology, data

collection and analysis methods, as well as theoretical framework and propositions are described, in order to ensure clarity and transparency for those reading and evaluating the research, and also for those who may want to build on the research (Burnard, 2006).

3.3 Conducting Interviews in Practice

Several practical issues were taken into account when conducting the interviews and interview location was one of them. In terms of the interviewing location, the researcher had a few choices such as an independent study room, the student cafeteria and the university garden. These are open to everyone at the university. Out of these, the researcher chose between one of the independent study rooms in the teaching building and the university garden, located behind the student dormitory building, according to the availability of these locations at the times when the pilot interviewees were free. The timetable for conducting each of the consequent interviews and their location is presented in Table 3.2.

Student No.	Student Year	Gender	Interviewing Date and Time	Location
F1	First	Female	0900-1000,20/05/2009	Garden behind the Dormitory
F2	First	Female	1030-1130,20/05/2009	Garden behind the Dormitory
F3	First	Female	1200-1300,20/05/2009	Garden behind the Dormitory
F4	First	Female	1330-1430,20/05/2009	Garden behind the Dormitory

F5	First	Male	1500-1600,20/05/2009	Garden behind the Dormitory
F6	First	Female	1630-1730,20/05/2009	Independent Study Room
F7	First	Female	1830-1930,20/05/2009	Independent Study Room
F8	First	Female	1930-2030,20/05/2009	Independent Study Room
F9	First	Male	2030-2130,20/05/2009	Independent Study Room
F10	First	Female	0900-1000,19/05/2009	Garden behind the Dormitory
F11	First	Male	1030-1130,19/05/2009	Garden behind the Dormitory
S1	Second	Male	0830-0930,16/05/2009	Garden behind the Dormitory
S2	Second	Female	1000-1100,16/05/2009	Garden behind the Dormitory
S3	Second	Male	1130-1230,16/05/2009	Garden behind the Dormitory
S4	Second	Female	1300-1400,19/05/2009	Garden behind the Dormitory
S5	Second	Female	1430-1530,19/05/2009	Garden behind the Dormitory
S6	Second	Female	1600-1700,19/05/2009	Garden behind the Dormitory
S7	Second	Female	1830-1930,19/05/2009	Independent Study Room
S8	Second	Female	1330-1430,16/05/2009	Garden behind the Dormitory
Fo1	Fourth	Female	1500-1600,16/05/2009	Garden behind the Dormitory
Fo2	Fourth	Female	1630-1730,16/05/2009	Garden behind the Dormitory
Fo3	Fourth	Male	1830-1930,16/05/2009	Independent Study Room
Fo4	Fourth	Female	1930-2030,16/05/2009	Independent Study Room
Fo5	Fourth	Female	0830-0930,16/05/2009	Garden behind the Dormitory
Fo6	Fourth	Male	1000-1100,16/05/2009	Garden behind the Dormitory
Fo7	Fourth	Male	1130-1230,16/05/2009	Garden behind the Dormitory
Fo8	Fourth	Male	1230-1330,16/05/2009	Independent Study Room
Fo9	Fourth	Female	2000-2100,15/05/2009	Independent Study Room

Table 3.2 Timetable and Locations of Interviews

The interviews were conducted in Chinese because this was the interviewees' first language and thus the language they felt most comfortable expressing themselves in. It is important to note that the interviewees study English only as a foreign language rather than as their second language. This distinction is based in different acquisition: "foreign language learning takes place when the language to be learnt is not the native language of the society: for example, learning English as a foreign language in Japan; second language learning takes place in a country where the language is spoken: for example, learning English as a second language in the United States" (Gass & Schachter, 1989, pp. 43-44). The case of the undergraduates is closer to that of the former example. Discussing the difficulties of learning English as a foreign language, Gass and Schachter (1989) explain:

The learner already has knowledge of one language and a powerful system of general abstract problem-solving skills. Within what general framework is the logical problem (the gap between available experience and attained competence forms what has been called the logical problem of language acquisition) of foreign language learning to be addressed? ... One obvious possibility is that the innate system that guides child acquisition no longer operates in adult foreign language learning (or, more weakly, that its operation is partial and imperfect). This would easily explain why foreign language learning is often a difficult and ultimately unsuccessful task...Moreover, the lack of general guaranteed success is the most striking characteristic of adult foreign language learning. Normal children inevitably achieve perfect mastery of the

language; adult foreign language learners do not...not only is success in adult foreign language learning not guaranteed, but complete success is extremely rare, or perhaps even nonexistent, especially as regards “accent” and the ability to make subtle grammaticality judgments.

(Gass & Schachter, 1989, pp. 41-44)

Therefore, in order to obtain qualitative data from these students that would be greater in richness and authenticity, it was more appropriate for Chinese to be spoken in the interviews, especially when speaking in English would require Chinese undergraduates to make effortful “subtle grammaticality judgments” (Gass & Schachter, 1989).

3.4 Ethical Issues

Ethical issues are inextricably interwoven into the methodologies of much of the research that is designated qualitative or interpretive (Cohen et al., 2000, p. 66). As Hitchcock and Hughes (1989, p. 199) note:

Doing participant observation or interviewing one’s peers raises ethical problems that are directly related to the nature of the research technique employed. The degree of openness or closure of the nature of the research and its aims is one that directly faces the teacher researcher.

(Hitchcock & Hughes, 1989, p. 199)

Three main areas in which ethical issues can arise in interviews in particular are informed consent, confidentiality, and the consequences of the interviews; each is problematic (Kvale, 1996, pp. 111-120). In relation to the semi-structured interviews conducted in this study, the interviewer informed each interviewee that the conversation between them would be recorded using a digital audio recorder and that the recordings would be transcribed and studied only by the interviewer, and in the near future. Interviewees were informed that the content of the conversations would be used solely for the research purposes of the study, that their personal information would be kept confidential, and that this information would not be recorded on the audio tapes. Before the beginning of each interview, interviewees read, and if in agreement, signed a consent form (see Appendices). Signing this form indicated that their participation was voluntary, but also meant that they were aware of their rights as participants. They had the right to ask questions about the research and to withdraw from the interview or overall research at any time if they felt uncomfortable. In addition, each conversation was viewed as one part of the qualitative data rather than as an individual autobiographical story, and would not be of interest to anyone but the researcher. Additionally, as will become apparent in the analysis section, decisions regarding whether participation in university activities and courses could be considered self-determined or not were not made explicit by the researcher during the interviews. Overall, the interviews were not seen as likely to present harm to the interviewees' personal lives.

Chapter 4 Data Analysis and Discussion

4.1 Thematic Analysis

In terms of thematic analysis, Braun and Carke (2006) have outlined the non-linear process (i.e., familiarizing oneself with one's data; generating initial codes; searching for themes; reviewing themes; defining and naming themes; and producing the case study report. A figure indicating the non-linearity of this process is below (Figure 4). This study follows these steps in order to obtain the themes for reporting the phenomenon. Particularly, the process of coding is statement-based rather than code-based, in order to obtain the complete meanings of these study participants' experience . The researcher list every expression relevant to the experience from the verbatim transcript of the raw data (i.e., the translated data from Chinese to English) by considering each statement with respect to significance for description of the experience. Then the researcher list non-repetitive, non-overlapping statements which contain invariant meaning units of the experience by recording and comparing all relevant statements with each other. These invariant meaning unit are the invariant constituents of the experience. Consequently, the researcher clusters and thematizes the invariant constituents into themes. Then, the researcher of this study synthesize the invariant meaning units and themes of each individual interview participant into a case study report, which includes verbatim examples.

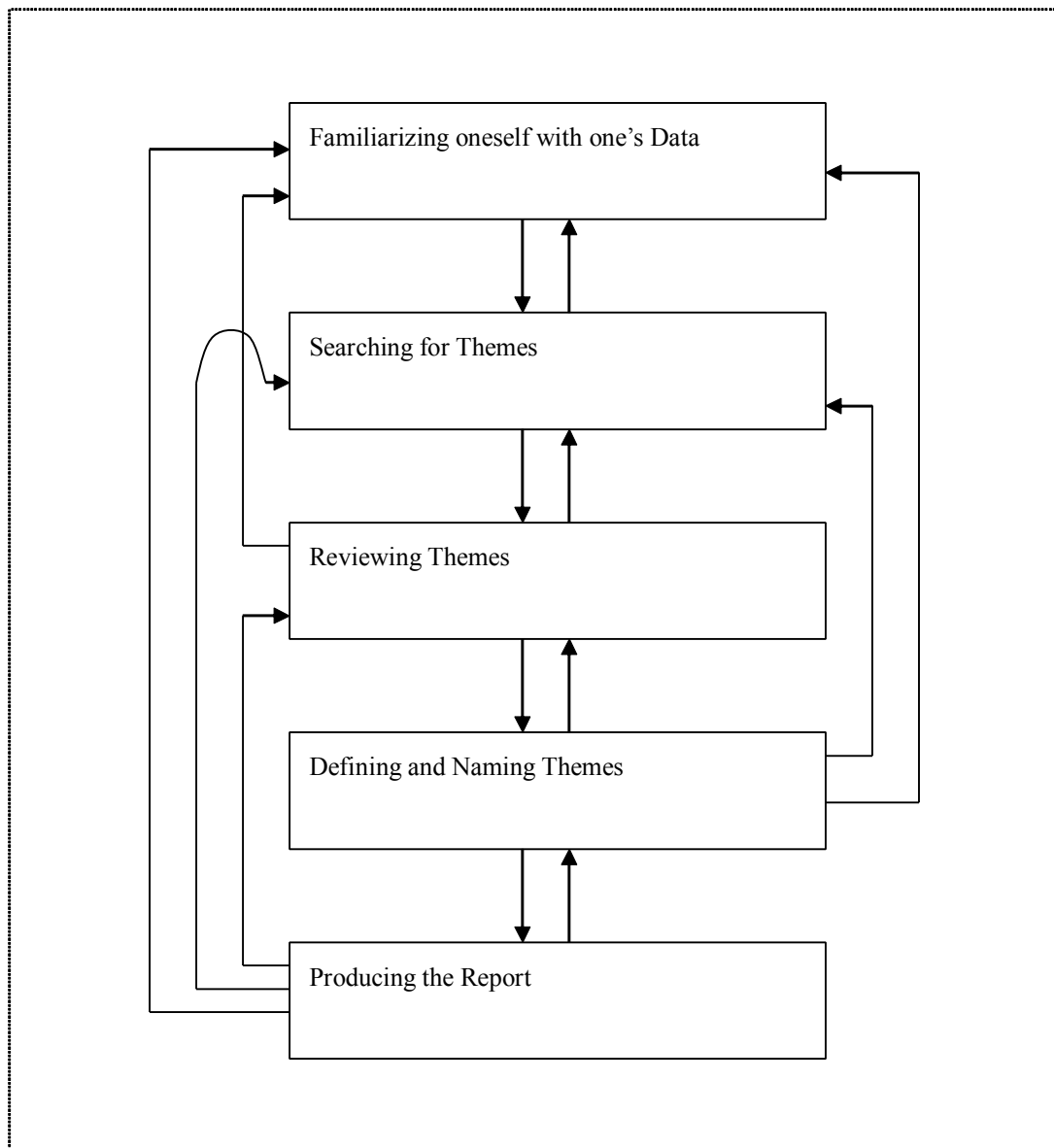


Figure 4 The Non-linear Process of Generating Themes

4.1.1 Familiarizing and Preparing the Data

The familiarization of the researcher with the data occurred through transcribing, translating, reading and re-reading data, in order to present each invariant meaning

units of the experience and themes by coding.

All the semi-structured interviews were digitally recorded and uploaded to a computer. After verbatim transcription of the Chinese interviews, the researcher translated them from Chinese into English, in order to prepare the data for coding and presentation in the data analysis and results in English. Translating interview conversations into English was believed to be easier for the researcher to code data as the tools and methods required for qualitative data analysis are mainly written in English (e.g., Strauss & Corbin, 1998; Mertens, 1998; Cohen et al. 2007; Miles & Huberman, 1994; Boyatzis, 1998).

Translation was carried out at least two times. Two months after the initial translation the researcher had forgotten some aspects of the interviews, and thus decided to translate them again. Finishing the second set of translations, the researcher put the two versions of the translated interview transcripts together and tried to find differences between the two versions. The researcher then checked the translations against the original Chinese versions and made appropriate corrections. It was difficult to keep the authenticity of the Chinese transcripts when translating the interviews word for word, due to the nuances of the different languages. This problem was solved on a case-by-case basis either by interpreting the meaning of the phrase rather than translating it word for word, or by retaining the Chinese words in the translated transcript when an appropriate English translation could not be found, and then providing an explanatory note. For example, the Chinese characters of “Ding Xing Si Wei” are retained in the translated transcripts, and are explained as representing the meaning “the innate and stubborn way or habit of thinking”. The process of comparing the Chinese verbatim transcription and the English translations

and correcting these translations continued until the coding stage. This marked a point where the researcher had checked and confirmed that there was no information missing and that there were no further translation misunderstandings.

4.1.2 Coding for Themes

Coding has been described as “a dynamic and fluid process” (Strauss & Corbin, 1998, p. 101), and comprises “the process of disassembling and reassembling the data” (Cohen et al. 2007, p. 492). Codes identify a feature of the data, either semantic or latent in content, and focus on “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon” (Boyatzis, 1998, p. 63). In the preliminary analysis of this study, codes are helpful; however, they do not comprise the main unit of analysis in this study overall, as this case study examines significant statements rather than codes.

The translated semi-structured interview transcripts were coded multiple times in order to organize and group the interview data thematically. Given that this study is theory- rather than data-driven instructed by theoretical propositions, the coding process was carried out with constant consideration of the theoretical arguments underlying the phenomenon (Boyatzis, 1998). The invariant meaning units of the experience help generate sub-themes for each more general theme, which simultaneously provide descriptors of these larger themes. Themes were obtained by clustering invariant constituents, which can be found when the statements of different interviewees allude to the same meaning. These invariant constituents become

apparent through a process of comparing and synthesizing the responses of the Chinese undergraduates in all three different years of study regarding their self-determined motivation to participate or not to participate in various university activities or academic courses. Table 4.1 provides an example of listing each expression relevant to the experience, in order to obtain sub-themes and then themes continuously (Please see more examples in Appendices):

Data Extract	Coded for	Sub-Theme or Clusters of meaning	Theme
I am not interested in the tasks because I do not want to do it in the same forms by the similar requirements. If I am required to do it many times in the same way I can not insist. I think the teachers should change the requirements of the tasks or the forms of accomplishing the tasks. Now, I cannot be motivated by the teachers and I think some of the classes are really boring. It is difficult for me to concentrate on the class.	1: I am not motivated to concentrate on the task, which is required in the same form and the similar requirements by teachers; 2: I feel boring when I cannot be motivated to study	1. the teacher hinders undergraduates to value integrated goals by requiring accomplishing tasks in the same form; 2. negative consequences when undergraduates cannot value integrated goals	1. environment al factors cannot support BPN 2. Consequence s of undergraduat es' internalizatio n

Table 4.1 An Example of Coding for Themes

Once data extracts had been coded, the themes were listed. Below is an example of the sub-themes resulting from listing invariant meaning units of the experience, showing these study participants' responses within the theme of "Expectations of the University Environment for Self-Determined Regulations" (see more examples of "Invariant Meaning Units of the Experience" in Appendices):

1. "I expect more independent study rooms and more seats in the library, more access to the Internet, updated video room facilities and a better research database."
2. "I think as we are already in university teachers should not interfere in such things. Different people have different ways of living."
3. "I think the school should let undergraduates have the right to choose whether they need to go to the class or not."
4. "I expect opportunities to communicate with English native speakers because I think that will be good for my specialized study of the English language."
5. "I expect opportunities to learn in larger groups both in my core and elective classes in order to be able to communicate with other students more."
6. "I expect a good atmosphere, which will motivate students to study."
7. "I think the university environment should put more efforts on academic studying and research development."
8. "I expect the academic activities can be rewarding, to be developed "in quality and content", and to "be tailored to undergraduates' needs for personal

development.”

9. “I think the university should provide us with internship opportunities. I do not want to search for these opportunities by myself so I think the university should provide some for us”.
10. “I expect the university to launch more special interest groups that can improve our abilities in preparation for careers and that are connected with meeting the needs of working in Chinese society”.
11. “I expect the university to provide fairer opportunities for students like me. I’m not saying that I do not fight for a chance to participate but the opportunities provided by the university are for those people who are more capable comparatively”.
12. “I expect this university can provide opportunities which can cultivate students’ taste and enhance undergraduates’ inner value, such as arts performance”.
13. “I think the teacher should have knowledge of literature, history and philosophy. If someone possesses these three aspects of knowledge, he/she is qualified no matter what course he/she is teaching, especially in the humanities”.

4.1.3 Presentation of Themes

4.1.3.1 The Structures and Themes Constructing the Phenomenon

A phenomenon is constructed by different structures. These structures are manifested through themes. Internal relationships among these structures, and therefore, within the phenomenon, can thus be examined through examining these themes. The themes or groups of sub-themes are expected to describe each condition that precipitates the phenomenon or is connected with it.

This phenomenon, operating within the framework of Self-Determination Theory, is constructed by ten structures (please see Figure 2), which have been mentioned above. The structures include: 1) personal factors that influence being self-determined or not; 2) expressions of integrated goals; 3) environmental factors that are interpreted as being *autonomy-supportive*; 4) environmental factors that are interpreted as *non-autonomy-supportive*; 5) implied basic psychological needs for competence and relatedness that facilitate undergraduates' *self-determined* extrinsic motivations to participate in various university activities or academic courses; 6) implied basic psychological needs for competence and relatedness that facilitate undergraduates' *non-self-determined* extrinsic motivations to participate in various university activities or academic courses; 7) variations between whether undergraduates are self-determined to accomplish integrated goals through *external regulations* or through *introjected regulations*; 8) implied basic psychological needs for competence and relatedness that *cannot* facilitate undergraduates' self-determined regulations; 9)

expectations of the university environment for self-determined regulations; and 10) consequences of being self-determined to accomplish integrated goals or not.

The most general themes, constructed according to the internal relationships among the structures of the phenomenon that have just been mentioned, are as below:

- 1) internal factors that influence being self-determined or not (Structure 1: Personal Factors influencing being self-determined or not; Structure 2: the expressions of integrated goals);
- 2) implied basic psychological needs for competence and relatedness that facilitate Chinese undergraduates' self-determined extrinsic motivations to participate in various university activities or academic courses when the environmental factors are autonomy-supportive (Structure 3: environmental factors are autonomy-supportive; Structure 5: basic psychological need of competence or relatedness implied facilitates undergraduates' self-determined and extrinsic motivations to various university activities or academic courses);
- 3) implied basic psychological needs for competence and relatedness that cannot facilitate Chinese undergraduates' self-determined extrinsic motivation to participate in various university activities or academic courses when the environmental factors are not autonomy-supportive (Structure 4: environmental factors are not autonomy-supportive; Structure 6: basic psychological need of competence or relatedness implied facilitates non-self-determined external motivations or introjected motivations to various university activities or academic courses; Structure 7: undergraduates vary from being self-determined to accomplish integrated goals to external regulations or to introjected regulations; Structure 8: basic psychological need

of competence or relatedness cannot facilitate undergraduates' self-determined regulations);

4) expectations of the university environment for self-determined regulations (Structure 9);

5) consequences of self-determined regulations or not (Structure 10);

6) different types of extrinsic motivation to participate in various university activities or academic courses.

This study employs “cross-case displays”, suggested by Miles and Huberman (1994), for displaying themes in order to enhance the “generalizability” of the results and to “deepen understanding and explanation” (Miles & Huberman, 1994, p. 207). In this study, cross-case displays show the contents of each theme, providing a descriptive structural view of the phenomenon. Analyses of themes will be presented in case study report. The analysis of undergraduates' different types of motivations to participate in various university activities or academic courses will be excluded from the case study report, which focuses purely on self-determined motivation. Rather these different types of motivation will be examined independently.

4.1.3.2 Elaboration on Specific Themes

The first theme of this study is the personal and internal factors that influence whether the Chinese undergraduates in this study are self-determined or not. Undergraduates are considered self-determined if their interview responses consider their integrated goals and how these are fulfilled, or in other words, how these external goals are

internalized and integrated to produce self-determined extrinsic motivation to participate in various university activities or academic courses. In this way, their self-determination facilitates their extrinsic motivation to participate in these activities and courses. Table 4.2.1 illustrates the structure of this theme, showing how these integrated goals are expressed, examples of these goals, and also, the basic psychological needs that are implied by these integrated goals.

Implied Basic Psychological Needs	Expressed Integrated Goals	Examples of Integrated Goals
Basic psychological need for competence	Future job/career concerns	Goal to find a job in the future
		Want to obtain various qualifications in order to be considered competent enough in Chinese society
	Life meaning/inner value/personality	Want to learn more/want to experience more/want to understand more/want to develop various abilities
		Want to pursue goals set by myself rather than goals approved by others
		Want to be more extroverted
		Want to have variety in life
		Want to be successful in various domains in life (i.e., extracurricular clubs, activities, interpersonal relationships)
	Academic Achievement	Have studying goals
		Want to be successful at academic study
	Lack of abilities (e.g., working abilities, abilities of communicating with others/no specialities)	Want to develop various abilities
Basic psychological needs for competence <i>and</i>	Relationships with others	Want to be approved or accepted by self and by others/need the help of others/consider interpersonal cooperation important, so interpersonal relationships are important/doing a

relatedness		good job is important
		Want to learn to get along with others/ practice for future job
		Want to compete with others

Table 4.2.1 Expressions of Integrated Goals

Tables 4.2.2 and 4.2.3 illustrate the internal factors that respectively support and hinder being self-determined to participate in university activities and academic courses in order to fulfill integrated goals. Table 4.2.4 takes the personal and internal factors that hinder being self-determined further, in looking at what personal factors were specific to those who did not express integrated goals in the interviews. Instead, these participants often indicated that they took part in activities and courses not because they felt these were externally required by future employers, peers, teachers, or wider society, but because they made them happy, and that they would cease to participate if they stopped enjoying them.

Internal Factors	Examples
Adjustment to University Academics	I learn by myself because I value the course as important to study and I cannot get inspiration from teachers' way of teaching/adjust the way of studying in order to be effective
Efficiency in Decision Making and Time Management	I can decide what I want to do
	Undergraduates can manage time / Time is enough to these undergraduates

Table 4.2.2 Internal Factors Supporting Being Self-Determined

Internal Factors	Examples
Personality	Shy and easily nervous in front of others
Lack of confidence	I am not good at doing it/I am not competent enough in doing this/I am not confident in doing this
Perceptions of Time and Energy as Limited	Cannot make everything perfect in terms of energy and time/I cannot manage to find the time to study as well as I would like to
Attitude to Studying	Not enthusiastic about academic studying until it is necessary for finding a job
Personal Role in Activities	I do not take part in those activities because participating cannot show my capabilities (there are only so many leadership positions in these activities and it is not worth it to just be a member)/personal role is not significantly valued by others

Table 4.2.3 Internal Factors Hindering Being Self-Determined

Personal Factors	Examples
Ways of Thinking	I do not understand what I need to do because of ‘Ding Xing Si Wei’ (stubborn or narrow thinking)
Attitude/ Personality	I am not so enthusiastic over doing what is required/I am mood-dependent

Table 4.2.4 Personal Factors of Participants Who Did Not Express Integrated Goals

The second theme that emerged is that the basic psychological needs for competence and relatedness facilitated Chinese undergraduates’ self-determined extrinsic motivations to participate in various university activities or academic courses *when factors in the university environment were interpreted as being autonomy-supportive*.

The basic psychological needs implied by the students in the interviews facilitated their self-determined extrinsic motivation by mediating the impacts of factors in the university environment on this motivation. Accordingly, this theme concerns which university environmental factors were considered autonomy-supportive, or in other words, factors facilitating the satisfaction of underlying basic psychological needs. The factors and underlying needs are shown in Table 4.3.1 below. Those university factors that facilitate the satisfaction of basic psychological needs towards self-determined extrinsic motivation also promote integrated goals. The environmental factors supporting the valuing of these integrated goals are shown in Table 4.3.2 below.

Implied Basic Psychological Needs	Factors Interpreted as Autonomy-Supportive	Examples
Basic psychological needs for relatedness and competence	Relationships with Others Promoted (Social)	Opportunities (by organizing activities) provided to meet and to know other people
	Teachers' Effective Behaviours (Academic)	Teachers encourage learning by understanding when undergraduates experience difficulties
		Teachers provide efficient suggestions for improving studying efficiency
	Academic activity setting (Social, Academic)	Opportunity to do research
Basic psychological need for competence	Good Studying Resources and Atmosphere (Academic)	Good University library
		Good learning environment
		Opportunities to register for foreign language courses
	Teachers' Effective Behaviours (Academic)	Teachers provide opportunities for independent study/to develop and improve independent studying abilities/teachers allow students to study how they like without constant supervision
		Interesting and appropriately challenging course delivery
	Access to Information (Social, Academic)	Specific information and events to help with the job search
		Provision of academic lectures or seminars that indirectly help students plan and make decisions for their future/careers
	Activity Setting (Social)	Setting of contests and competitions that help students accumulate competence

Table 4.3.1 Environmental Factors Interpreted as Autonomy-Supportive

Implied Basic Psychological Needs	Factors Supporting the Valuing of Integrated Goals	Examples
Basic psychological need for competence	Teachers' Effective Behaviours (Academic)	Teachers' encouragement/suggestions that help students value their integrated goals by emphasising the significance of studying
		Course is delivered by teacher in a way that helps students feel they will learn from it/that it is worthwhile learning
	Social Activity Setting (Academic)	Social activities help students to realize that academic studying is the most important factor for later life
	Academic Studying Atmosphere (Academic)	Language learning atmosphere is good
	Academic Activity Setting (Academic)	There are opportunities for doing academic research

Table 4.3.2 Environmental Factors Supporting the Valuing of Integrated Goals

The third theme of this study is that Chinese undergraduates' basic psychological needs for competence and relatedness cannot facilitate their self-determined extrinsic motivations to participate in various university activities or academic courses when factors in the university environment are interpreted as non-autonomy-supportive. Non-autonomy-supportive environmental factors, shown in Table 4.4.1, thus inhibit the mediation process. When students interpret factors in the university environment as non-autonomy-supportive, the basic psychological needs for competence and relatedness facilitate students' *non-self-determined* external motivations or introjected motivation. This sort of motivation stops students from accomplishing their integrated goals, which can be seen in the comparison between the "instead" clause, representing

the integrated goal, and the “the student” clause, representing either introjected or externally regulated goals, in Table 4.4.2 below. Table 4.4.3 then examines the factors in the university environment that stop Chinese undergraduates from valuing their integrated goals.

Implied Basic Psychological Needs That Cannot Be Satisfied	Environmental Factors Interpreted as Non-Autonomy-Supportive	Examples
Competence	Assessment Design (Academic)	Assessment requires undergraduates to recite in order to master knowledge/students finish the task without understanding/assessments do not test understanding
	Activities/ Academic Course Settings (Social, Academic)	Learning for understanding is impossible/undergraduates cannot learn from this course or activity/course or activity considered meaningless/coursework is unrelated to undergraduates' lives and interests/undergraduates do not want to pursue a career in that field
	Teachers' Ineffective Behaviours (Social, Academic)	No provision of practical guidelines for finding jobs
		Do not inspire undergraduates
		Do not provide space and time for students to adjust to their teaching methods
Competence and Self-Determination	Activities / Academic Courses Setting (Social, Academic)	Do not give enough opportunities to learn in self-determined ways and therefore impede self-development
		Rare opportunities to participate in larger scale university-based events, which are allocated to bigger departments/rare opportunities for normal undergraduates (unfair competition)
		Time is limited and mostly occupied by academic courses
		Seats in the most interesting courses are limited/limited opportunities to apply knowledge/access to information is difficult to obtain
		Opportunities to interact with wider society are limited/information on careers is provided by administrators in the university rather than industry
		No opportunities to audit courses in other language departments
		The format of activities only contributes superficially to personal development
	Studying Atmosphere	Limited resources for informally studying more

	and Resources (Academic)	science-based subjects
		The seats in the self-learning rooms and library are not enough
		Library stock and database is not good enough for academic studying
		It is not convenient surfing on Internet; the equipment in the video room is out of date
	Strict supervision/ management (Academic)	Been supervised too much by teachers/ the university/ dormitory student management is too strict / always be forced to do something
Relatedness and Competence	Relationship with others (Social)	Peer communication is rare which facilitates sharing information about finding jobs
		Incorporation of others: cannot finish team work together/ cannot make others get involved in the activities

Table 4.4.1 Non-Autonomy-Supportive Environmental Factors

Implied Basic Psychological Need Facilitating Regulation	Type Non-Self-Determined Extrinsic Regulation	Difference Between Integrated Goals and Non-Self-Determined Extrinsic Goals
Competence	Introjected regulation	Instead of being interested in team work in order to learn how to study cooperatively, the student feels revolted by other members' non-involvement in completing the task
	External Regulation	Instead of valuing academic knowledge as interesting and useful, the student only studies to pass exams
		Instead of wanting to interact with others by participating in social activities the student only looks for opportunities to get to know others and leadership positions in order to gain scholarship money and respect
		Instead of wanting to read English effectively, the student only participates in reading activities to keep their attendance record

Table 4.4.2 Non-Self-Determined Extrinsic Motivation

Unsatisfied Implied Basic Psychological Needs	Environmental Factors	Examples
Competence	Teachers' Ineffective Behaviours (Academic)	Course Delivery: it is difficult to accept the teachers' teaching/I do not like the teachers' teaching/ the teacher cannot inspire me/the teacher cannot clarify the problem
	Academic course settings (Academic)	The course content is not attractive/I am not interested in/it is boring to take this course
Competence and Self-Determination	Academic course settings (Academic)	No opportunity to apply learnt knowledge/how it is put into practice/it is difficult to understand how the knowledge can be applied in the future

Table 4.4.3 Environmental Factors That Hinder Undergraduates' Valuing of Integrated Goals

The fourth theme is that the Chinese undergraduates have expectations of the university environment; they expect that the university environment can facilitate their integrated goals.

Mediating Basic Psychological Need	Categories of Expectation	Expectation Items
Competence	Expectations of Academic Course Settings	General Selective Courses should be set according to different departments' developmental needs or to students' developmental needs
	Expectations of Teachers' Effective Behaviours	Teachers should be inspiring/they should make students want to learn more in class
	Expectations of Academic Development	The university should put more effort into developing students' research abilities
		More opportunities to sit in courses of other departments

		More opportunities to take part in relevant seminars and lectures
		More opportunities to study effectively (i.e., reading English effectively)
	Expectations of University Atmosphere and Resources	The university should provide students with an atmosphere which motivates students to study
		Better infrastructure: more independent study rooms/more seats in the library/more access to the Internet/updated video room/adequate research database
	Expectations of Activity Settings	More interest groups organized by the university/these should be tailored to meeting societal needs placed on graduates
		Seminars/activities about finding job should be made more relevant and useful to students
		The university should provide greater variety within academic studying and also extracurricular activities
		The activities should be improved in quality and activity contents
Self-Determination	Expectations of Course Settings	It is not necessary to force students to take courses they are not interested in/students' performance should not be assessed by class attendance
		Not necessary to occupy all of students' time with courses
		Students can choose the courses they are interested in/course setting should be more flexible
	Expectations of Teacher Supervision	The teachers in the university should not supervise students as much as when they were in high school and primary school

Competence and Relatedness	Expectations of Relationships with Others	More opportunities to communicate with foreign people or other students and faculty
	Expectations of Academic Course Settings	Courses provided should be in bigger groups, not always in small classes
	Expectation of Communication Opportunities	Frequent and meaningful communication/mutual relationship building
Self-Determination and Competence	Expectations of Opportunities for Self-Determined Decision-Making	More opportunities for students to do what they are really interested in/want to know/make their own choices
		More opportunities to value the significance of future jobs/to decide on future job possibilities/to obtain inspiration and enthusiasm for life
	Expectations of Fair Opportunities for Developing Abilities	More opportunities for ordinary students or for students in relatively small departments rather than just for outstanding students
	Expectations of Internship Opportunities	More opportunities for internships in order to learn how society works/to obtain information about finding jobs

Table 4.5 Expectations of the University Environment

The fifth theme running through the research data involves the positive, negative, and neutral consequences of accomplishing or failing to accomplish integrated goals, the process of which is facilitated by basic psychological need satisfaction. The neutral category of consequences, in other words, that students do not care, occurs when integrated goals are neither accomplished nor unaccomplished. This category is significant given that it relates to specific basic psychological needs, but indicates only an acceptance of the situation. Basic psychological need satisfaction and the consequences of this for undergraduates are shown in Table 4.6 below.

Consequences	Implied Basic Psychological Needs and State	Factors	Examples
Positive	Relatedness and Competence: Satisfied	Relationships with others	I made progress in interpersonal communication/building up interpersonal relationships/I developed my communication skills by meeting more people
			I was accepted by others for doing a good job
	Self-Determination and Competence: Satisfied	Feelings of satisfaction with self	I feel good/satisfied
		Self-confidence	I have gained confidence
	Competence: Satisfied	Competition with others	I found my life is more varied than others in my dorm
		Personal development/achievements	I have discovered my potential
			I have gained a lot of preparation for future jobs
			I value myself by taking part in activities or tests
			I made progress in academic studying and working
		Feelings of self-confidence	I think I am competent in finding a job or applying to a postgraduate programme
Negative	Competence: Unsatisfied	The situation of academic study in class	Teachers' requirements lack variety and it is difficult to sustain my interest in the course
			The class is torture, and I am easily distracted
		Feelings	How the course is taught makes me feel that taking it is wasting my time
			I do not feel successful in this course/I

			don't feel like I'm doing very well/I do not feel very good, or even frustrated
			I feel stressed
			I feel regret that I did not previously study as well as I should have/that I did not develop my abilities
			I feel like I do not understand what I have learnt
		The situation of information access	I do not know who I can ask about jobs and developing my interpersonal skills
		Perceived self-confidence	I do not think I am competent in academic studying or mastering the skills Chinese society requires
	Self-Determination : Unsatisfied	Feelings	I feel annoyed
Neutral	Self-Determination and Competence: Unsatisfied	Feelings	I feel that I am a little bit out of touch with wider society and do not have opportunities to apply what I have learnt
			I am disappointed/I feel it's a pity that I cannot take part in big events because I only have time to study
	Self-Determination :Related	Acceptance of the situation	I got used to doing what is required
	Competence: Related	Acceptance of the situation	I have realized there is a gap between the university and the Chinese society/I have realized that development depends on the self rather than the circumstances

Table 4.6 The Consequences of Accomplishing or Failing to Accomplish Integrated Goals

The sixth and last theme of this study is that Chinese undergraduates have different extrinsic motivations to participate in various university activities or academic courses. While different sorts of extrinsic motivation are not the main part of studying the current phenomenon, distinguishing what types of extrinsic motivation are self-determined or not is a necessary step in describing it. This distinction requires assessment of the internalization process of these extrinsic goals, namely by looking at the type of regulation used. These, in addition to the basic psychological needs energizing these extrinsic motivations (BPN in the table), are set out in Table 4.7 below.

Type of Regulation	Types of activities	Reasons	BPN energizing extrinsic motivation
External	Social and Academic	To keep the attendance record	Competence
		Because it is required and I'm forced to do it	Self-Determination
	Academic	Because performance accounts for one part of formative assessment	Competence
		To pass the exams in order to earn academic credits	Competence
		To get CET band 4 and CET band 6 certificates, a compulsory requirement	Competence
	Social	To earn credits in Comprehensive Assessment for scholarship	Competence
		Because there is a money reward	Competence
Introjected	Academic	I would feel pretty good/satisfied with the results	Competence
		I would feel guilty if I do not attend	
		I do not want to ruin my teachers' expectations	Relatedness
		I take part when I'm in a good mood	N/A

	Academic and Social	Staying in the dorm is boring/I have nothing to do if I do not take part in activities	Self-Determination
	Social	I do not want to be isolated from other classmates if most of them take part in the activity	Relatedness
		It makes me feel like I belong to the group	Relatedness
		I do it because I think I am able to do it	Competence
		It is my duty, responsibility	Self-Determination
		I have enough spare time to take part in university activities	Self-Determination
	Physical	It makes me feel that I am needed in terms of my abilities	Relatedness, Competence
		I am good at doing it	Competence
Identified	Social and Academic	It helps develop my abilities which is beneficial to my overall personal development	Competence
		It helps me gain more experience	Competence
		I can learn by taking part in the activities	Competence
		It can help me make decisions about my development in my future career/helps me find a job in the future	Competence
		It helps me learn how to think from other group members' perspectives	Competence
		It helps me prepare for further learning/prepare for tests that allow me to enter onto a postgraduate programme	Competence
		It is useful	Competence
	Social	It helps me get along with friends through working together	Relatedness, Competence
		I want to be accepted by others for doing a good job	Relatedness, Competence
		I want to learn new things, which are different things from academic studying	Competence
		The activities are organized by students and so the atmosphere for taking part in activities is quite good, and different from high schools	Competence
		There were no activities in my high school so I want to have a try at university	Competence

		It helps me meet and get to know other people	Relatedness, Competence
		It helps me make other people happy	Relatedness, Competence
	Physical	It is good for my health	Competence
		To meet and get to know different people	Relatedness, Competence
		It helps develop my abilities which is beneficial to my overall personal development	Competence
	Academic	It helps me keep track of my progress	Competence
		I can show how capable I am	Competence
		To prove that I worked hard during the university years	Competence
		It is a new form of learning and I want to have a try	Competence
		I do not want to let it all pile up until right before the exams or it will stress me out too much	Competence
		It helps me foster interest in a specific field	Competence
		It helps me to develop my knowledge of specialized subjects	Competence
		It helps me get along with friends by working together	Relatedness
		I do not want to fail in the exams	Competence
		I want to make a living like most graduates of the department by finding a job based on my computer and English skills	Competence

Table 4.7 Chinese Undergraduates' Extrinsic Motivations and Internalization in the University

The above table categorizes the activities and courses mentioned by the Chinese undergraduates during the interviews into social and academic activities, social activities, physical activities, and academic activities (for further details of these

activities, please see Appendices). Each reason for behaviour is shown alongside the basic psychological need which it implies.

The reasons for participating in various university activities or academic courses were coded by regulation type as this was not expected of the interviewees. Interviewees cannot be expected to tell the researcher which reason belongs to which type of behavioural regulation and motivation. The categorization of these regulations followed the framework of Self-Determination Theory. Firstly, through thematic analysis, interview responses were coded by extracting and grouping the various reasons for participating in one activity. For example, the reasons why the undergraduates participated in a Career Development Association activity are coded as followed, and the interviewees sharing this reason are indicated:

- To help develop my abilities which is beneficial to my overall personal development (F1, F6)
- To meet and get to know different people (F6)
- Helping to get along with friends by working together in the association (F6)
- Getting a position in the association which helps earn credits for scholarship (F6)
- Gaining some working experience which helps to find jobs in the future (F6)

Secondly, the reasons for participating in various activities were summarized and synthesized by deleting repeated reasons. For example, the reasons “Because I thought it would be beneficial to my personal development” and “Because it helps to develop personal abilities” were combined to form the reason “Because it is good for personal development.” The name of the activity and interviewee’s number were kept for the next step in the coding, for example (see more examples in Appendices):

- Because it is good for personal development (F1, F6: Career Development Association, Student Union Activity; F4, Hometown Presentation, Department- held Activities; S7, S6, other various activities, Student Union Activity; S5, Research Project, academic activities; S6, English Speech Contest, National English Contest for College Students, academic activities; S6, S5, Lectures or Seminars, University-held Activity; Fo3, Arts Festival, school clubs (Drama club activities) singing contest, Fresher's welcoming Party, Student Union Activity; Table tennis contest, Sports activities, University-held activities. Fo9, English Speech Contest, academic activities)
- To meet and get to know different people (F6, Career Development Association, Student Union Activity; F3, Newspaper Design Competition, Department- held activities; F7some activities; S7, other various activities, Student Union Activity; Fo4, sports activity)

Then, the various reasons for participation were categorized into “external regulation”, “introjected regulation”, “identified regulation”, and “intrinsic regulation” according to the definitions of these regulations (see Literature Review), as well as through comparison with examples from Deci and Ryan (2002) and Ryan and Connell (1989). For example, external regulation, described as behavioural regulation towards attaining a positive end state or avoiding a negative end state, is illustrated by Deci and Ryan's (2002) example of getting money or avoiding parental reprimand, respectively. For introjected regulation, they use the example “a woman votes at municipal elections because she feels she has to, because it is her duty as a citizen”. This elector can be said to be introjected toward municipal politics” (Deci & Ryan, 2002, pp. 46-47). Their example of identified regulation, in which people regulate

their behaviour through identification with the activity, is of “a boy in high school who decides to get up an hour earlier to review his chemistry notes because he feels it is personally important to do so is regulated by identification” (Deci & Ryan, 2002: pp. 46-47). Ryan and Connell (1989, p. 750) explain that external regulation is characterized by following rules or avoiding punishment, introjected regulation is to get self- and other-approval or to avoid disapproval, and identified regulation relates to self-valued goals or outcomes of personal importance (for further examples of Ryan & Connell, 1989, p. 752, see Table 2.1).

Once each reason that undergraduates mentioned as motivating their participation in various university activities or academic courses was categorized into different types of motivations (i.e., external, introjected, identified or intrinsic motivation), the researcher analyzed which basic psychological need, implied in their responses, could be seen as facilitating this reason. As shown in Table 4.7, the Chinese undergraduates’ *non-self-determined* external motivations (e.g., external and introjected regulations) to participate in various university activities or academic courses for the reasons of keeping the attendance record, formative assessment, obtaining certificates, scholarships, or money, respectively, were facilitated mainly by the implied basic psychological need of competence. However, since these reasons are out of requirement and following rules, or in other words, introjected motivation, the students’ basic psychological need for self-determination cannot be satisfied. Their implied basic psychological needs facilitate neither the fulfilment of non-integrated nor organismic goals. As integrated and organismic goals are argued to initiate self-determined behaviours (Deci & Ryan, 1985, p. 149), introjected motivation cannot thus be considered self-determined motivation.

While analyzing the participants' motivation by trying to understand their integrated goals, some items which Self-Determination Theory might consider introjected were reconceptualized as identified regulation in this study, given the Chinese university context (for more details regarding how these undergraduates expressed their self-determinations in accomplishing their perceived integrated goals, see the case study report below). For example, the interviewed Chinese undergraduates considered the three reasons: "being accepted by others for doing a good job", "showing others how I am capable of doing it", and "to prove that I worked hard during the university years" as goals that were personally important (Deci & Ryan, 2002, p. 17), and thus had become integrated goals (Deci & Ryan, 1985, p. 156), guiding their participation in various university activities or academic courses. Because these goals are valued in terms of Chinese tradition and contemporary Chinese society, their outcomes and social utility with regard to significant others (Deci & Ryan, 1985, p. 137) are valued by the students and identification occurs. As a result, participation in activities and courses driven by these goals and reasons can be considered self-determined.

The next level of analysis is the case study report. It covers how the basic psychological needs for competence and relatedness facilitate the Chinese undergraduates' self-determined motivations to participate in various university activities or academic courses by mediating the impacts of factors in the university environment on these motivations.

4.2 Case Study Report

This study focuses on Chinese undergraduates' basic psychological needs and how these interact with their self-determined and extrinsic motivations to participate in various university activities or academic courses. Two conditions are required for Chinese undergraduates' basic psychological needs for competence and relatedness to facilitate their self-determinations in acting out their choices for effective functioning in the social world. One requisite condition is that the undergraduates are self-determined to accomplish their integrated goals. The second is that the undergraduates interpret the university environment as autonomy-supportive. If this second condition is not met, the basic psychological needs for competence and relatedness facilitate undergraduates' *non-self-determined* motivations (i.e., external regulation or introjected regulation) to participate in various university activities or academic courses. Even if the first condition is met, the failure to interpret the environment as autonomy-supportive means that students will not have the autonomy to end their participation in activities and courses. They will need to participate for external reasons. As a result, even if they are determined to accomplish their integrated goals, they will be unable to do so and their participation will be non-self-determined.

Undergraduates' basic psychological needs are implied in how they express their self-determinations and in their descriptions of whether or how the university environment supports or hinders the accomplishment of their integrated goals as they participate in these activities and courses. The following section examines undergraduates' expressed integrated goals and how these imply basic psychological

needs. As these integrated goals operate in a specific context, however, this is described briefly first.

Chinese undergraduates' motivations to participate in various university activities or academic courses are influenced by their more general motivations for attending university. To some degree, this motivation is based on Chinese traditional values of the importance of finding a job that will enable working with one's intellect, and of pursuing wealth, social status and authority. Chinese students' predominantly interdependent self-construal leads them to adopt these cultural values as their own, and incorporate them into their own integrated goals. Attending university can lead to the accomplishment of these integrated goals, and therefore the main reasons for going to university are often "job hunting" or "applying for postgraduate programmes".

Undergraduates' Expressions of their Integrated Goals and the Implied Basic Psychological Need for Competence

As previously noted, Deci and Ryan (1985, p. 32) advanced White's (1959) conception of a need for competence by suggesting a basic psychological need for *self-determined* competence. Undergraduates express this need in different ways, one of which is in relation to preparing for future jobs. They possess proximal integrated goals for wanting to develop their working abilities (i.e., competencies that will be valued in the workplace), academic performance, and effective study skills, in order to accomplish the further integrated goal of preparing for their future jobs and thereby satisfy their basic psychological need for self-determined competence. For example, undergraduates' integrated goals of working in a "big company" or working to

organize events and cooperate with others provides them with self-determined motivation to study well academically and develop their working abilities through participation in social activities at university. One undergraduate wants to find a job like those sought by most other graduates, which does not require either “too much physical labour or too much thinking” and associates her future job with organizing events and cooperating with others:

“I want a normal job where I can work with my intellect, or I want to do something that requires organizing events and cooperating with others. There are some activities at university that will help me to find this sort of job. I am quite busy with them and I often feel tired. For example, because I participate in sports games held by the department, I cannot get a noon break and I have to come early to help to organize it. If the teacher in Student Union asks me to do something I have to go do it for him immediately, even during the very hot noon break. Everyone likes reading novels and having a rest in the dormitory room during the noon break, but I know I cannot do that because of what I want to achieve.”

This undergraduate interprets the university environment as autonomy-supportive because it provides opportunities for her to develop her working abilities in organizing events and cooperating with others. As a result, she is motivated to remain involved in the Student Union activity. She does not intend to do jobs requiring heavy labour when she graduates. This fits into the wider understanding that as working with one’s intellect is historically accepted and respected by others in Chinese society, students attend university in order to be able to work with their intellect rather than

with physical labour. Being accepted and respected by others is important to Chinese people, especially given their predominant interdependent self-construal (Singelis, 1994, p. 581). This example shows how the university environment fulfills students' expectations when it is interpreted as autonomy supportive: it provides informational events, such as social activities that enable students to compete socially when looking for jobs, and opportunities for developing working competencies that will be valued by their future employers.

Undergraduates also express the implied basic psychological need for self-determined competence in the academic ways that they prepare for future jobs. Undergraduates are self-determined to work in certain fields, and thus they are motivated to study well in these fields at university. Academic courses are provided based on departmental course requirements at TFSU, where the Educational Technology department provides courses in English language, computer science and educational theories. Though these courses are compulsory, undergraduates in this department often become interested in them, and are likely to consider pursuing these interests in their career orientations. For example,

“I think I can apply computer science knowledge in my future job, therefore I am interested in computer science studying.”

“I took part in studying related activities because I think I can develop my future career in this field so I want to learn more about it.”

Others possess their own goals for their future careers from the outset, and these students decide how well these compulsory courses fit their career orientations and

tailor how they experience the courses accordingly:

“I am quite interested in the fields of economy and business (I may develop my future career in these fields). Knowledge of these fields is not required in terms of subject learning in the department of Educational Technology. I read books on these topics at home and also look for relevant things to read in the library.”

“In terms of my own goals for the future, I have to put most of my energy into studying. I want to work in the field of English language. That means I have to learn English well. I have to make a big effort to learn language well.”

“I want to develop my future career in the field of education or educational psychology rather than computer science, therefore I pay more attention to studying educational theory.”

“I want to find a job in the field of English language education therefore I do not want to only pass the related courses exams but I want to study well and study more.”

The academic courses provided by the environment represent the informational events that promote these undergraduates' self-determined behaviours to study harder and achieve competence in the fields they are likely to pursue in future. In other words, these informational events indicate that their environment is autonomy-supportive, make it possible to satisfy their implied basic psychological need for competence, and in doing so, achieve their integrated goals.

How Students Express their Integrated Goals: Competence and Relatedness

Some undergraduates are self-determined to accumulate competence by building up interpersonal relationships and by obtaining additional qualifications, both of which are beneficial for their job search or, more generally, for working with their intellect after graduation. These self-determinations are facilitated by the basic psychological needs for competence and relatedness, especially in Chinese society, which places great emphasis on social relationships (Li, 2008) and is characterized by predominantly interdependent self-construal (Singelis, 1994, p. 581). As such, competence in building up interpersonal relationships is valued in the workplace, but also rests on being approved by others. Similarly, being self-determined to accumulate competence by obtaining various qualifications to improve one's chances of obtaining a job also involves wanting to be accepted by Chinese society as competent. For example, some undergraduates expressed that they sought acceptance and approval and wanted to have themselves thought as being a competent individual: "I am a hard-working person", in addition to being able to find a job in the future. Both of these needs motivate them to obtain qualifications and certificates during their four years at university. For example, one undergraduate said, "I want to get some qualifications", in order to "become competent in Chinese society"; therefore "I take some training courses outside of the university environment because this university cannot provide training specific to these qualifications". Another said:

"I want to be independent, a person with good communication abilities and skills that employers will value when I graduate from university therefore I try to develop my interpersonal skills and different competencies and try to experience more."

Given that networking in wider society sometimes requires getting along with individuals that one “does not like”, some undergraduates are motivated to learn this interpersonal skill within the university environment. Some undergraduates possess realistic understandings of how work-based interpersonal relationships function in Chinese society and have realized the significance of learning to build them up. For example,

“Interpersonal relationships are important in Chinese society, you know... If I do not find an important person to provide my reference, it will be hard for me to get a decent job. Interpersonal relationships are complicated. So I do not think there is fair competition.”

“I won’t be successful if I only work by myself. Cooperation with others is quite important. So I think it is important I learn to get along with others. I have to work with others at most times (in the future). In the university environment, I build up and develop my interpersonal relationships by working on projects with others. If we have problems we solve them together.”

Some undergraduates are motivated to build up interpersonal relationships by making friends at university:

“I am interested in talking to students, in order to build up my interpersonal relationships. I do not think that academic knowledge learning at university is the most important. I learn how to learn here, and using these methods I can learn through my whole life. It is more

important to meet people at university and I think it is necessary to get along with them. We become good friends by talking to each other. We share things with each other and trust each other and I think this will benefit my future (career) development.”

Specifically, some undergraduates are self-determined to be accepted by others, therefore they are motivated to build up interpersonal relationships. For example,

“I want to be accepted by others therefore I try to get along with others.”

“I want to be accepted by others by doing a good job, so I insisted on being involved in activities that would provide opportunities to do so.”

For those undergraduates who are motivated to be accepted by others or to build up their competence in interpersonal skills, the university environment provides autonomy by providing opportunities to meet others or to become accepted and respected hard-working people. These students’ self-determination to accomplish these integrated goals supports Singelis’s (1994, p. 581) claim of predominantly interdependent self-construal in Chinese undergraduates, and Markus and Kitayama’s (1991, p. 240) suggestion that this implies these students’ consideration of others or relationships as referent and needs, desires or goals motivates them to act. Furthermore, Chinese undergraduates are here shown to emphasize external and public features, such as status, roles, positions and relationships and the significance of experiencing feelings of belonging (Singelis, 1994, p. 581). Thus, Chinese undergraduates’ acute understandings of their social surroundings, particularly in terms of how they interact with others (Markus & Kitayama, 1991, pp. 231-232) in

their university activities, illustrates the interpersonal dimension to accumulating competence, and indirectly, the possibility for satisfying both the basic psychological need for relatedness and for competence.

How Students Express their Integrated Goals: Varied

While the integrated goals discussed above were voiced by numerous students within the interviews, various other integrated goals were introduced less frequently and by individuals. The expressions of these rarer integrated goals also imply the basic psychological needs of relatedness and competence, and interact with the presence or absence of autonomy-supportive informational events in the university environment. These integrated goals include wanting to work directly after graduation rather than apply for postgraduate programmes (groups described above spoke generally about future careers, which might be preceded by postgraduate study); wanting to develop study skills and academic performance in different ways; wanting to enhance their personal development or the variety in their life (as prior to university, opportunities to do so were limited); and wanting to “experience and know more”.

Undergraduates who expect to work straight after graduation rather than apply for a postgraduate programme are self-determined to participate in those activities at university that help develop their interpersonal skills and their abilities to organize activities. For example,

“In fact, I only pay attention to my future career because I am in my fourth year. Previously I took part in activities that I was really interested in. But later, I found out that there was a lot of job

information targeted to fourth year undergraduates and I realized I would be graduating soon. I now pay attention to this kind of development and I am motivated to participate in these careers-related activities.”

The university environment is interpreted as autonomy-supportive by providing this undergraduate with informational events, a range of job-related activities. Participating in these activities is likely to develop the undergraduate into a better candidate for the job market, indirectly satiating their basic psychological needs for competence (i.e., in being a good candidate) and relatedness (i.e., in being considered competent). As this undergraduate is self-determined to find a job, he will thus be self-determined to attend and participate in activities that provide related information. When some undergraduates begin trying to find a job in their third or fourth year of study, they admit that they were “not enthusiastic about studying” when they were in their first two years but become self-determined to do better later, in order to find a job.

Undergraduates who are self-determined to do well academically and satisfy their basic psychological need for competence possess self-determined motivation to participate in activities that will help them develop their study skills and improve their academic performance. For example,

“I took part in an English language speech contest, in order to develop my English speaking ability.”

“I would love to go to the library and read magazines there in my spare time. I feel it would be good to read something about English

language studying. It is good for studying.”

The university environment provides undergraduates with the informational events in terms of activities and study resources that they expect. These in turn facilitate the development of self-determined undergraduates’ academic study skills and academic performance. Some undergraduates are not satisfied with studying only for obtaining good scores in exams; they are self-determined to study in order to track and improve their own academic abilities. For example,

“I study for myself in order to obtain good academic achievement even though I am also required to do so (exam requirements); I understand which parts I am weaker at by taking exams.”

Those undergraduates who are self-determined to apply for further learning are also motivated to excel academically. For example,

“I want to go abroad for further study so a good GPA is important, and I want to study well.”

Given that foreign language ability is a requirement for applying to postgraduate programmes, some undergraduates participate in courses that permit them to learn another foreign language. Therefore, they register for in-session Korean Language courses that are provided by the university. Undergraduates’ reasons for academic study are thus more complex and varied than purely for obtaining high exam scores, as is required when students are preparing to attend Chinese universities.

This suggests that while at university, students feel the necessary autonomy for them to be self-determined to develop in different, more personally meaningful ways than they were able to when they were in high school. Some undergraduates compare themselves to their high school peers who have gone on to universities with higher standards. They feel it is therefore necessary to try harder to develop themselves in order to compete. For example, some undergraduates “enhance my personal growth through pressure or stress” when “compared to previous high school classmates who attended better universities in bigger cities (for example, Beijing)”. Some undergraduates’ self-determination to develop is more internally focused; they wish to enhance their inner value and understand the essence of life:

“I do not want to listen at university. In my spare time, I like studying philosophy and I think it has important lessons, based on history. It tells me the significance of living and life. I study by myself...I attend university not only for knowledge learning but also to develop various aspects of myself.”

Because this student feels that they cannot derive inspiration to enhance their personal development from the teachers in their department, they study philosophy in their own time. Before attending university, Chinese students study in order to obtain the highest possible scores on the Chinese College Entrance Examination. Given how highly valued attending university is, and because university seats are limited, Chinese students’ time is therefore mostly occupied with academic study in primary and high school. As a result, the emphasis of studying is more on obtaining high exam scores than on enhancing personal development, even though, as previously discussed, personal development, or self-actualization (Rogers, 1963), is an essential function of

ego and the central drive of life (Freud, 1923/1962). Deci and Ryan (1985, p. 8) argue that human beings possess and are driven to satisfy this need by internalization. While at university, Chinese undergraduates finally have the opportunity to pursue such self-actualization and enhance their inner value through self-determination.

In addition to enhancing their personal development, Chinese undergraduates are self-determined to develop variety and depth in their life experiences, which they have been unable to attain in high school. For example,

“I want a life of variety, I want to be successful academically and in other aspects so I try to study well and take part in various activities.”

Some undergraduates are self-determined to “learn more, understand more and experience more”, leading them to participate especially in activities which “are organized and launched by foreign language experts”. Some undergraduates wanted to cultivate interests in specific fields, such as English essay writing, and believing that “nurturing interests is a process of self-development”, they expressed a wish to submit to an essay writing competition in order to gain more experience. Specifically, some undergraduates think they lack certain abilities, and therefore they are self-determined to develop these. For example,

“I am confident in my academic ability, but not in my working abilities because I don’t have experience of a part-time job or organizing activities. When I was at high school, I only focused on academics according to a strictly arranged schedule.”

Therefore, they were motivated to “learn more” and to become “more extroverted”. The needs requiring development are more varied than in primary and high school. In addition, this undergraduate uncovers the situation in Chinese reality that in order to attend university, Chinese students make efforts on academic study under strict supervision. As their most time is occupied by academic studying, they do not have time to experience part-time jobs. The university environment has thus been interpreted as providing undergraduates with multiple opportunities for personal development and for accomplishing integrated goals.

Internal Factors Facilitating Undergraduates’ Abilities to Act Self-Determinedly

Some internal factors were found to support undergraduates’ self-determined behaviours to accomplish their integrated goals. The ability to adjust oneself was essential, especially when the environment was perceived as being non-autonomy-supportive and lacking in informational events that could support their self-determination. For example,

“In terms of studying computer science, I think what I can learn from my class is not enough so I learn outside of the classroom, by myself.”

If undergraduates disagreed with how the teacher delivered the course and felt it was unrewarding, these undergraduates adjusted their behaviours of studying:

“I decided to learn by myself when I found that the teachers’ methods of teaching were unrewarding and uninspiring.”

Some undergraduates decided to study by themselves rather than follow their teachers' slow pace in the classroom, finding independent study "much more efficient". When they realized that gathering together with other classmates to do their English reading did not work well, other undergraduates even decided to start their morning English reading one hour before the official Morning Reading activity started at 07:20 each weekday, so that they could become more efficient at reading English.

Personality and ability to successfully manage their time were also internal factors that were found to support their self-determined behaviour and accomplishment of integrated goals. For example, some undergraduates' personality tended to be highly autonomy-oriented (Deci & Ryan, 1985, p. 154). This supported their self-determined behavioural choices as these individuals find it easy to make decisions that will help them accomplish their self-selected goals:

"I think I am the kind of person who can decide what I want. I rarely hesitate in making a decision. I always know what I want. For example, I know that I will find a job rather than apply for a postgraduate programme. I really want to work and I do not want to stay in school anymore. Even though my parents are pressuring me to continue studying, I will follow my own decision to work."

In addition, undergraduates' ability to successfully manage their own time was also found to be supportive of their self-determinations in acting out their choices. For example,

“I can manage to find the time to do what I want to do, such as study economic and business related knowledge.”

Such undergraduates were able to manage their course requirements *and* follow additional interests; they did not feel their autonomy was inhibited by an overly weighty class schedule.

Internal Factors Impeding Undergraduates’ Abilities to Act Self-Determinedly

Individual Personality

Some internal factors impede undergraduates’ self-determinations in accomplishing their integrated goals. For example, one undergraduate is too “shy and nervous” to perform on the stage so she does not dare participate in arts and performance activities even though she understands that such participation would potentially benefit her through developing her personal capabilities. Hardin (Hardin et al. 2006) argues that rewards may modify the behaviour of shy individuals, given that research has shown links between shyness and behavioural responses to stimuli in the form of social rewards (Davidson et al. 2000). This particular undergraduate does not mention or interpret arts and performance activities as providing her with the social reward of effectance-enhancing feedback (White, 1959), which would otherwise help her to feel competent and comfortable enough to take part. As a result, arts and performance activities are *not* interpreted by this undergraduate as informational events that might support effectance-enhancing feedback and facilitate her self-determination to develop in terms of arts and performance. The internal factor represented by this undergraduate’s shy personality hinders this undergraduate’s internalization.

Lack of Self-Confidence

Some undergraduates are not self-determined to act out their choices due to a lack of confidence. Bandura (1993) argues that a belief in one's competence (i.e., confidence) guides or leads one's thoughts and actions. Students' perceived higher self-efficacy or self-confidence leads them to be more likely to tackle a challenging task and to persist with difficulties (Archer et al. 1999, p. 32). Given the person's competencies, an optimal challenge is necessary for the internalization of regulations (Deci & Ryan, 1985, pp. 143-144). If there is a mismatch between what the person is able to do and what they are required to do, however, that person will be unable to integrate a regulation. Optimal challenge can motivate individuals to regulate their behaviours because this regulation is sufficiently close to what they are able to do or are confident accomplishing, or even are just confident in being able to do well (Deci & Ryan, 1985, p. 144). If presenting self-competence to others or being more competent than others is an important aspect of an individual's construction of self-confidence, they will avoid those tasks which they are not good at and choose those which they are good at, even if they understand the significance of learning through engaging in the former. For example, some first year undergraduates thought that they lacked specific skills or abilities (e.g., "I am not confident"):

"I do not want to take part in some activities, and maybe it is kind of avoidance...an escape from what I am not good at... even though I know that I lack those abilities and that I need to develop myself by taking part in those activities. I do not have the confidence to participate."

The following undergraduate describes why she is motivated to study rather than to participate in arts or performance activities even though she understands the significance of such participation:

“In my dorm, some of my classmates are good at one thing and others are good at another. For example, some are good at performing on stage, singing, dancing and building up good interpersonal relationships. I am good at studying and I am better in studying than them and I am confident in this. So when I am with them I have confidence. I am always thinking that everyone has a speciality if they are good at something, and I study well.”

This undergraduate's confidence in her studies but lack of confidence in arts or performance activities inhibits her motivation to participate in the latter type of activity because the construction of her self-confidence depends on others. If she is not better than others on a task, she will not be confident in herself and avoid doing what she is not confident in, even though she clearly values the significance of those activities that she avoids. Arts and performance activities therefore do not present an optimal challenge to this undergraduate for internalization of becoming better and more confident in the performing arts. Additionally, as this undergraduate is not confident in doing better than others in this activity, she is not motivated to participate.

One student provided another example regarding how the internal factor represented by a lack of self-confidence limits self-determined participation in certain academic

courses. If the undergraduate does not think that he possesses the “ability to think logically” that would enable him to perform to a high standard on a specific course, he would rather quit and channel his efforts into another course which he *is* good at, in order to attain better performance. This undergraduate’s lack of confidence leads him to believe that taking this course will not give him positive-competence feedback that would indicate his “good academic studying performance”. Such feedback is hypothesized to be extremely significant to the internalization process (Deci & Ryan, 1985, p. 144). Even if an individual is not intrinsically interested in a specific course, the feelings of competence that come from positive-competence feedback are important in promoting the internalization process (Deci & Ryan, 1985, p. 144). This course, which requires the “ability to think logically”, is not an optimal challenge for this undergraduate as he perceives that it would not be able to provide him with competence-enhancing feedback. Consequently, this undergraduate’s lack of self-confidence in his ability to think logically inhibits him from studying this course.

Unsuccessful Time Management

Although some undergraduates are self-determined to study well, they are unable to achieve this as a result of their inability to effectively manage their time. Often, these undergraduates cannot find the time to study because their time is mostly occupied by taking lectures: “I cannot do everything perfectly, given that time is limited; classes occupy too much time so I haven’t been able to study each course as well as I would like”, even though this undergraduate expected to do well on all of their academic courses.

“I feel I cannot manage my studying time very well so it (academic

studying of each course) was a little bit low in efficiency.”

“I cannot do everything perfectly and my energy is limited. I tried to learn a lot and do well on all my courses. I found it was not realistic at all... I am doing a double bachelors degree and another degree in economics. I take courses for it. It occupies my time as well. There are also exams for the economics degree, although the requirements are not as high, but I do have to spend time on preparation and make an effort to do well. As a result, I’ve just focused on the courses I really want to learn well. I cannot do well on everything. So I just require myself to reach an average standard for all my courses and really pay attention to those that I really want to develop. I am not comfortable with the fact that there are some courses I cannot do very well on but I have to accept the reality of the situation.”

These undergraduates cannot study as well as they are self-determined to because of their inabilities to manage their time or to find the time because academic courses occupy so much of their personal time. The university environment, to some degree, is therefore interpreted by some as non-autonomy-supportive, leaving individuals unable to find the time to study each subject as well as they are self-determined to.

Valuing, yet Limited Availability, of Leadership Roles

Given that Chinese undergraduates’ self-determined participation in activities is driven by wanting to improve their competencies for their own personal growth in addition to becoming better candidates for future jobs, they expect that the roles they will have access to by participating in these activities will provide such development.

However, the leadership positions that might provide this development in these activities are of a limited number. Those unsuccessful in obtaining these positions end up as members and are unlikely to master these competencies. This results in their inability to exercise self-determined behaviours in these activities, and impedes the accomplishment of their integrated goals. For example,

“I am not in a position of responsibility in this activity.”

“Many activities, I only help to organize the activity but I cannot learn from it. I am not running the activity or doing the main organizing role.”

“I am a member of the Academic Activities unit and I am always allocated to do something such like prepare rooms for meetings. I do not want to do this sort of thing and I am not interested in it but I have to as it is my duty and responsibility as part of the unit. It (helping to organize) does not require skills. It cannot show what I am capable of and it does not develop my personal abilities.”

These undergraduates think highly of their roles in university activities and are not satisfied only helping to organize activities with instruction from others, especially when this does not require practicing complex skills and does not show their capabilities to others. As argued previously, according to Singelis (1994, p. 581), Chinese undergraduates are characterized as possessing a highly developed interdependent self-construal. This is supported in this study in that the Chinese undergraduates readily acknowledged the significance of external and public features, such as status, roles, positions and relationships, and of experiencing feelings of belonging. Given that Chinese society places such heavy emphasis on interpersonal relationships (Li, 2008), whether one instructs and leads others or takes a more

passive role as being instructed or lead by others makes an important difference. People who are considered able to instruct or lead others are perceived by the undergraduates as the more capable of the two positions, a reflection of the acceptance and respect of such individuals in wider Chinese society. As some undergraduates must be members rather than leaders, and thereby cannot instruct or lead others in these university activities, they would rather quit from the activity and lose the opportunity to accomplish their integrated goals by participating in the activity. For the lucky few, however, gaining leadership roles in which they can lead and instruct other members leads to highly valuing their participation:

“I was promoted to vice president of the Student Union, so I am sure I will love taking part in Student Union activities.”

Ultimately, positions of responsibility in university activities can help undergraduates to accomplish integrated goals and behave in self-determined ways.

Internal Factors Preventing Development of Integrated Goals

In addition to internal factors that inhibit students from being able to act in self-determined ways, there are also internal factors that prevent undergraduates from possessing integrated goals. If the undergraduates do not possess integrated goals for development, their internalization is also prevented. For example, as a result of a narrow way of thinking, which was mentioned in interviews as “Ding Xing Si Wei”, some undergraduates do not take their own initiative or understand what they could do to enhance their own personal development or growth. Instead, they get used to accepting what their teachers or parents require them to do, which they have done

since primary school in their predominantly academic, exam-oriented preparation for university attendance. It thus seems that “Ding Xing Si Wei” is a personal and internal factor that is influenced by the exam-oriented Chinese education context and prevents students from developing integrated goals and self-determined behaviours.

Some undergraduates in this study were driven to participate in university activities and academic courses not in order to accomplish integrated goals through self-determined behaviour, but in an effort simply to be happy. They did not express integrated goals, but a positive emotional outcome, as motivating their behaviour. For example,

“I am not a very enthusiastic person. I do not have particular requirements of myself. I am fine if I am happy. I think that the opportunities (in the university) allow me to decide what I want to do. I will not do what I do not like. Whether I like doing something depends on my mood.”

Therefore, she behaves in order to attain happiness rather than identification; if she was forced to do something, she felt it was “annoying”. Although this undergraduate’s behaviour is self-driven, that it is not driven by proactive use of environmental information to make choices and regulate self-selected goals that are necessary for personal development and growth, means that this undergraduate’s personality cannot be considered autonomy oriented within the wider framework of Self-Determination Theory (Deci & Ryan, 1985, pp. 153-154).

How Basic Psychological Needs for Competence and Relatedness Facilitate

Chinese Undergraduates' Self-Determined and Extrinsic Motivation to Participate in University Activities and Academic Courses by Mediating the Impact of Factors in the University Environment on this Motivation

Environmental Factors Interpreted as Autonomy-Supportive Informational Events

The impact of informational events provided by the settings of *social activities* on Chinese undergraduates' self-determined and extrinsic motivations to participate in university activities and academic courses is mediated by the undergraduates' implied basic psychological needs for competence and relatedness. The university provides the autonomy that students expect by organizing social activities. These social activities provide informational events through providing choices (e.g., Zuckerman et al., 1978) that support competence and relatedness. By choosing to participate, students obtain opportunities to meet and get to know other people. Interviewees also indicated that these activities provided opportunities to develop their "interpersonal communication skills and widen personal views". Undergraduates' basic psychological need for competence was satisfied by satisfying their basic psychological need for relatedness with others. For example, some undergraduates valued the significance of meeting, getting to know other people and getting along with each other, in order to develop both their interpersonal relationships (relatedness) and interpersonal skills (competence). The activities the university provided in which undergraduates met and got to know other people (relatedness) made some undergraduates feel they had progressed in their interpersonal skills (competence): "I made progress in interpersonal communication". Others, participating in sports activities, found that they grew in competence in terms of an enhanced worldview: "I make friends and widen personal views by taking part in sports activity with others".

The findings of this study differ from the literature review in terms of the relationship between satisfying the basic psychological needs for competence and relatedness. In the literature review, the interpersonal context decides the satisfaction of the basic psychological need for competence by providing positive feedback as an informational event (e.g., Deci, 1971; Deci et al. 1981; Blanck et al. 1984; Ryan & Grolnick, 1986). In the literature review, this positive feedback comes from significant others and relationships are generally seen as *supporting* rather than necessary for the satisfaction of competence. This study suggests that within the Chinese university context satisfying the basic psychological need for relatedness through interpersonal relationships is *necessary* for the satisfaction of the basic psychological need for competence.

The impact of informational events provided by the settings of *academic study* on Chinese undergraduates' self-determined and extrinsic motivations to participate in university activities and academic courses is also mediated by the undergraduates' implied basic psychological needs for competence and relatedness. Given that these undergraduates value academics, their department is interpreted as autonomy-supportive in its provision of academic courses and activities as informational events that enhance students' academic study and the development of their interpersonal skills. For example, if an undergraduate believes that "the knowledge taught in the course is useful for future career development", that undergraduate will be motivated to study. In addition, the Department of Educational Technology provided undergraduates with opportunities to conduct research projects to "develop learning ability and interpersonal skills through working together". Another student said,

“There are some English language contests and competitions in the university, which are beneficial for accumulating academic competence.”

Furthermore, the department was also considered as supporting students' autonomy by providing courses that enable undergraduates to learn other foreign languages:

“There is an in-session Korean language course which is free to register for. I want to take it because I am interested in learning another foreign language and also because it will help me get onto a postgraduate programme.”

In the academic domain, the provision of interesting and worthwhile academic activities and courses is interpreted by students as an informational event, as it provides opportunities to accumulate knowledge and academic competence. Through these informational events, the university environment is interpreted as autonomy-supportive; it allows for the satisfaction of the implied basic psychological need for competence in providing opportunities for students' self-determined accumulation of academic competence and for relatedness in helping them appear more competent to others and being accepted and respected for this. As a result, the students' motivation to participate in these activities can be considered as self-determined and extrinsic.

The impacts of teachers' encouragement, instructions and course delivery on undergraduates' self-determined and extrinsic motivations to engage in their academic study is mediated by these undergraduates' implied basic psychological need for

competence in academic performance. For example, first year undergraduates were motivated to study because their agreement with their teachers' encouragement and explanations about the significance of studying the specific academic course coincided with their implied basic psychological need for competence in academic performance. In this way, teachers provided a meaningful rationale for studying that could be interpreted as an informational event and supported students' self-determined motivation (Deci et al. 1994). Teachers in the Department of Educational Technology also provided students with instructions and suggesting of how to study efficiently and effectively. For example, one student acknowledged the fact that "the teacher provides suggestions for improving our ability to recite English texts" as an autonomy-supportive informational event as they believe that successful recitation of English texts is beneficial for mastering the English language. The student's basic psychological need for competence in the English text recitation activity thus mediates the impact of the teacher's instructions and provides the student with self-determined motivation for engaging in the English text recitation activity.

The impacts of the university's infrastructure and general environment on undergraduates' self-determined and extrinsic motivations to engage in their academic study are mediated by their implied basic psychological need for competence. For example, some undergraduates interpret that the "university library stock is sufficient for finding sought after information and resources that are necessary for good language studying". Interpreting the library resources as sufficient is an informational event that indicates the university infrastructure matches the needs of the students and can permit the satisfaction of their implied basic psychological need for competence in academic performance. The university's infrastructure is therefore interpreted as satisfactory in terms of accomplishing this need and can then facilitate

self-determined motivation, supporting previous research on educational infrastructures even in special education (e.g., Field et al. 2003).

The impact of access to career-relevant information on undergraduates' self-determined and extrinsic motivations to participate in university lectures and seminars is mediated by their implied basic psychological need for competence. If students interpret these lectures and seminars as providing such information access, they will interpret the lectures and seminars as informational events, supporting their self-determination. For example, some students said that "the access to information about career decisions and job hunting is good", and that they believed it would help them successfully find jobs and fulfil their integrated goals. Others said, "there are some lectures and seminars organized by the university" that helped them make decisions about their future jobs. Field (Field et al. 2003) has argued that information access can support self-determined motivation in special education, and focuses on the successful communication between teachers and students in terms of providing information to meet their needs and desires. In this study, the lectures and seminars are considered informational events that provide access to desired information and their impact as environmental factors thus supports students' self-determined motivation through being mediated by their basic psychological need for competence in being informed about potential jobs.

Environmental Factors that Foster Integrated Goal Setting

The informational events that help students to interpret the university environment as autonomy-supportive, in particular in terms of the academic atmosphere, teachers' provision of a meaningful rationale for studying (Deci et al. 1994) and the provision

of social activities, also help students to set and pursue integrated goals. When certain outcomes are valued by the individual's environment or by significant others, the individual may adopt these goals as their own, integrated goals. Integrated goals are seen as motivating undergraduates' self-determined and extrinsic participation in university activities and academic courses. At Tianjin Foreign Studies University, the general atmosphere and teachers value the outcomes of studying foreign languages and cultures and being a good student, and therefore help set these as integrated goals for students who attend the university. One student said,

“The teacher requires us to recite English texts, and I think it is useful to me. It is how you learn a language and recitation is useful in showing us how the language is usually expressed.”

The value teachers in the Department of Educational Technology place on specific activities and their explanations for doing so also help students set integrated goals to do well on these activities. For example, “teachers’ encouragement by telling us the significance of studying to our future career means that we want to study as we agree”. Specifically, students said,

“The teacher told us that we need to apply what we learn in our Computer Database course when we do our Graduation Project. She recommended that we keep our course materials such as Powerpoint printouts and handouts. Most of us tried to study them as well as possible.”

Some undergraduates are prompted to set integrated goals by taking part in activities

provided by the university:

“When I was in the second term of my first year, I realized that I could not put studying aside. Especially after I took part in the activities organized by the Career Development Association I realized that there is a lot of pressure to find a job in the future so I have to study well and realize that it is the most important thing.”

The provision of the Career Development Association activities helps the student understand how necessary strong academic performance is for finding a job after graduation and leads them to set doing well academically as an integrated goal. Interpreting this social activity as an informational event supports the students' self-determined motivation to engage in their studying. In this case, and others, the informational event has an influence on the individual's self-determined behaviour outside of the specific activity, and on the student's academic behaviour. As a result, students' motivation for finding a job after graduation can be conceptualized as existing on a higher level of motivation (Deci & Ryan, 2002, p. 51) that incorporates proximal lower goals of studying well academically and participating in a social activity itself. Basic psychological needs thus mediate the impact of factors in the university environment on students' motivation on different levels.

Environmental Factors Interpreted as Non-Autonomy-Supportive

When the university environment is interpreted as controlling, that is, it does not provide informational events indicating that it is autonomy-supportive, students' implied basic psychological needs for competence and relatedness cannot facilitate

their self-determined and extrinsic motivation to engage in university activities and academic courses in order to accomplish their integrated goals. Specifically, controlling environmental factors consist of dormitory management, social activity settings, teachers' behaviours, the overall studying atmosphere of the university, and finally, academic course settings. The students' integrated goals that are negatively affected and cannot be accomplished consist of conducting research, learning English well, having a good grasp of Chinese society, building up interpersonal relationships and developing working abilities.

In terms of dormitory management, undergraduates find it "too strict" to facilitate the learning behaviours of those students who are motivated to develop their academic studying abilities. As such, it fails to satisfy their implied basic psychological need for competence. For example, a student explained, "I cannot work on my academic research projects in the lab as late as I need to because the dormitory gate gets closed early", which is considered unreasonable given that this undergraduate's daytime is mostly occupied by classes. As a result of this perceived controlling dormitory management, the satisfaction of this undergraduate's implied basic psychological need for competence in developing his academic studying abilities is hindered, and, he cannot facilitate his self-determined and extrinsic motivation to successfully conduct his research projects.

In terms of academic course settings, courses are seen as occupying the majority of undergraduates' time, hindering their self-determination to act out their own choices. For example, an undergraduate who expected to attain a good basis in the English language said, "there is not enough time to sit in other language courses in the language department" because "time is mostly occupied by courses in the Department

of Educational Technology”. Even though students are allowed to take additional courses, the lack of time to pursue individual interests contributes to an interpretation of the university environment as controlling. As a result, this undergraduate’s implied basic psychological need for competence in studying English cannot be satisfied and her self-determined and extrinsic motivation to sit in other language courses and study foreign language well is not facilitated.

Often social activities are run in such a way that students’ self-determined motivation to participate is undermined. This sometimes occurs when activities are conducted in a way that students interpret to be out of touch with society, such as when “seminars on finding jobs are presented by university administrative staff rather than people who actually do that job and who have practical experience of finding a job in that field” or when “the teachers in the university environment who provide seminars on job hunting cannot give students practical guidelines”. Other students elaborated by saying:

“Access to practical information about the outside world (i.e., Chinese society) is not so good and there’s not enough of it. I cannot obtain this access, I do not know who I can ask about it, and I am not quite sure how to go about finding it if I can’t find someone to ask.”

“The opportunities provided by this university to know or understand Chinese society are rare, and there is not enough time outside of classes to find these opportunities (for example, internship opportunities) by myself.”

Some students also found that the activities were not up to their expectations. For

example, some undergraduates in the Department of Educational Technology complained that they had no opportunities to improve upon the offerings of their own department in terms of sitting in more advanced language classes in the foreign language departments of the university, even though the students expected and would have liked to attain a better grasp of foreign languages. Problems with other departments also included the issue that:

“Opportunities to participate in big events are rare when most of the seats are allocated to big departments such as the School of English Studies.”

Furthermore, activities were considered irrelevant or superficial, or as failing to provide satisfactory learning experiences. “The university organizes some conferences which are not related to my life and which I do not intend to participate in”. Another student said:

“I think university activities do not provide a depth of experience and are superficial. I don’t think I can make real friends by taking part in this activity even though I think highly of developing interpersonal relationships.”

As a result of this, and of being unable to take on positions of responsibility in the activity, individuals said, “I cannot always learn from taking part in activities”. These controlling environmental factors do not provide autonomy-supportive informational events and leave undergraduates’ implied basic psychological need for competence in terms of obtaining access to job-relevant information, building up interpersonal

relationships, participating in big events, learning through participating in activities or studying foreign languages unsatisfied. Consequently, their self-determined and extrinsically motivated activity or course participation is not facilitated, and their integrated goals remain unachieved.

On some occasions, teachers' behaviours, as one aspect of environmental factors, were also reported as failing to support undergraduates' self-determined choices. Ineffective or controlling ways of interacting with students and delivering the course can hinder undergraduates' self-determined and extrinsic motivations to engage in the course. For example, students found it unrealistic for teachers to provide them with only knowledge that they knew they could have obtained themselves. Instead, they wanted teachers to provide them with information about how to use what they had learnt. Some students said, "the teachers only taught us the grammar and vocabulary but we need to know how to apply this practically". Others complained that their teachers failed to inspire them:

"Some of the courses are taught by postgraduate students. I do not think they are professional or skilful enough and I do not think they can inspire us about life either."

Because these behaviours are considered non-autonomy-supportive, this undergraduate's implied basic psychological need for competence in studying English and learning about life more generally is thus unable to facilitate his self-determined and extrinsic motivations to engage in English lessons and other courses.

The studying atmosphere of university also possesses certain characteristics that

prevent self-determined behaviours. For example, the constant focus on one's primary course means that pursuing one's interests in another subject is regarded with confusion. One student, who spoke about an interest in studying science subjects was discouraged from doing so by considering other students' attitudes to this. He said,

“I studied Probability in the independent study classroom. Other students around me felt it was weird that I studied mathematics. It made me feel uncomfortable, so I lost my interest in the course and only did the homework that was required.”

In addition, the studying resources provided by the university do not support the satisfaction of the implied basic psychological need for competence in studying. For example, students said:

“The hardware (i.e., library stock and database) is not so good in the university environment in terms of academic studying.”

“It is not convenient to try and surf the internet while I am in the university environment. There are only a few computers in the library connected to the Internet and there is always a long queue. The teaching building has the same issues with Internet access. Also, the equipment in the video room is out of date.”

These undergraduates' implied basic psychological need for competence in studying science subjects and for learning more by using the university's information resources is unsatisfied and therefore does not provide the autonomy support required to facilitate their self-determined and extrinsic motivations.

There are also issues with some academic courses as environmental factors hindering undergraduates' self-determined behaviour. For example, the use of recitation in how courses are taught and assessed makes it difficult for undergraduates to obtain depth in their subject knowledge and to develop meaningful academic skills. One student said,

“The general selective courses (electives), such as history and politics, test students by requiring them to recite knowledge which makes the students feel that it lacks significance... I do not think it is worthwhile and I forgot what I had learnt about the history of computer development after I took the exam. I hate doing something that I know lacks meaning.”

This student provides an example of how the way courses are taught and assessed can be interpreted as non-autonomy-supportive, which fails to provide undergraduates with opportunities to master knowledge but rather only “recite knowledge”. Undergraduates do not want to take this type of course, and their implied basic psychological need for competence in mastering knowledge cannot facilitate their self-determined and extrinsic motivations to engage in such academic courses.

Environmental Factors that Hinder Integrated Goal Setting

Certain university environmental factors, such as some teachers' methods of teaching and how some academic courses are set, hinder the setting of integrated goals. In doing so, these factors hinder undergraduates' self-determined and extrinsic

motivations to participate in university activities and academic courses. Teachers in the Department of Educational Technology hinder undergraduates' potential integrated goal setting because of how they teach. For example, teachers require their students to complete tasks in similar ways and always with similar requirements; students find it hard to engage in "completing these tasks". If students consider their teachers' methods to be "boring", they find it "difficult to concentrate on the course" and to understand the significance of studying this academic course. Another example of how environmental factors can hinder integrated goal setting is how academic courses are set. Some undergraduates perceive the content of the courses available to them as unattractive, or feel that it is difficult to learn and master, making it difficult to value the significance of studying the course. Deci and Ryan (1985, pp. 143-144) argue for the necessity of optimal challenge in promoting internalization or integration by suggesting that there is a match between what an individual is capable of and what they are required to do with respect to the task and the situation at hand. Optimal challenge, given this person's level of competence, helps the individual integrate his/ her behaviours. Often, however, the courses the undergraduates in this study encounter do not provide an optimal challenge, and the undergraduates are not able to do or feel that it is difficult to do what is required of them. In addition, some undergraduates admitted that they have rare opportunities to understand how what they are learning can be applied in practice, which is what they took the course expecting to learn. For example, as one course ended, one student said, "I have no opportunity to see how the knowledge I have learnt is applied in practice". Being unable to see how knowledge learnt in their university courses is significant or can be applied to the real world hinders undergraduates from considering it worthwhile and from adopting "doing well in these courses" as an integrated goal.

Switching from Integrated Goal Pursuit to Non-Self-Determined Motivation for Behaviour

When undergraduates cannot achieve their integrated goals due to environmental factors, and they are forced to continue their participation in activities and courses, they switch from trying to pursue integrated goals to non-self-determined motivation for behaviour (e.g., external and introjected motivations). The basic psychological needs that previously energized undergraduates' integrated goal accomplishment consequently work to facilitate non-self-determined motivation. In this process, basic psychological needs change in how they are presented. Whereas previously, the integrated goal of learning a course's content well might have been energized by the basic psychological need for competence, when behaviour is non-self-determined, the same need might facilitate behaviour such as keeping course attendance, in order to retain competence in this area. For example, during a teamwork activity one undergraduate's motivation changed from being motivated to participate in order to learn how to cooperate with others to feeling revolted by other team members' lack of involvement in finishing the task:

“Teamwork is good because it makes students try to work cooperatively in order to finish tasks. But it is really related to personal ability and preference. Especially boys, we do not like doing the task when we are in a team. I feel other boys do not want to do anything and they do not want to take responsibility but only play computer games. I do better (than the boys in my team) but it is still far from what I really want in terms of my expectations. In fact, in the beginning, I felt like I would love to take part. But later I felt that my

team mates did not want to get involved. It revolted me. For example, there was a team discussion on Modern History. The teacher asked us to prepare some background information and materials for the discussion in class, and the other members of my team did not want to do it. I had to prepare everything on my own... Teamwork is just an empty term because it does not motivate all members to get involved. Teamwork does not make full of its potential and we engage in it superficially. I finished the work as I would any other task.”

Though the undergraduate can see the potential benefits of teamwork, he acknowledges that it does not work when only one undergraduate is motivated to get involved. Instead, teamwork needs to be supported by cooperation from everyone on the team. The other members on the team, considered as one aspect of the environment, along with their non-involvement, fails to support this undergraduate to work in a team. In completing the teamwork activity as just another task, the undergraduate’s basic psychological need for competence in finishing the task in a self-determined way and to accomplish his integrated goal of working with others is impossible. His basic psychological need for competence changes then and facilitates his completion of the work as just another task (i.e., introjected regulation).

One undergraduate’s motivation changed from being motivated to study this academic course by feeling that its content might be useful to being motivated to study only for passing exams:

“There was a course last academic year called Computer Knowledge Foundation that I was not interested in taking because

I hate reciting knowledge. The knowledge tested in the exams may be useful but I do not like the way of learning it... by reciting...for example, the knowledge of computer developing history was tested in the final exams. The knowledge itself was pretty much commonsense, but we were required to recite and repeat it in the exams. It was really awful and far-fetched. I do not think recitation is worthwhile and I forgot what I had learnt about computer developing history after I took the exam. I hate doing things that I know lack meaning but that I have to do to pass the exam.”

Even though the undergraduate thought that the information he would learn in the Computer Knowledge Foundation class might be useful and would have been motivated by this to do well on the course, the environmental factor of how it was taught was non-autonomy-supportive and changed his motivation to just wanting to be successful on the exam. As a result, this undergraduate’s implied basic psychological need for competence in passing exams facilitates the external regulation of his behaviour.

As a result of understanding that an activity would not actually provide an opportunity to obtain a better grasp of Chinese society, one undergraduate’s motivation to take part thus changed to feeling that their participation in the activity was not significant and therefore only engaging in it to have a chance at winning a scholarship:

“I signed up for the Career Development Association which is supposed to give us chances for example to interact with outside organizations but this did not happen in reality. Many activities

involved me just helping to organize the activity, and I could not learn from them. I only performed insignificant organization jobs according to instructions. However, participating in these activities helps me to get credits for obtaining a scholarship.”

This undergraduate is first motivated to participate in the social activity in order to improve his grasp of Chinese society; his motivation is mediated by his basic psychological need for competence in interacting with and understanding society. However, when he perceives that the environment is non-autonomy-supportive, his self-determined participation in the activity changes, and his implied basic psychological need for competence in obtaining a scholarship facilitates his external motivation to participate.

One undergraduate’s motivation to read English effectively by participating in a reading activity changed to participating only to keep their attendance record:

“I do not want to take part in the morning reading activity. I do not like reading with others in the classroom. The point of it is to practice our oral ability in the English language but I am not impressed with what I have read because I can’t remember what I have read or understand it properly. If I read in an environment of my own choice where I can hear my own voice reading aloud I think it would be more effective. This kind of requirement (of reading together) is good for the whole class because there must be some students who do not read. I still feel it is too restricted for me, though. We go to the classroom together every morning on

weekdays and it is a waste of time. But because attendance at the Morning Reading activity is included in our student attendance record and attendance is a part of summative assessment, I have to go.”

Although this student is self-determined to improve their oral ability in the English language, the university does not provide the autonomy for this undergraduate to do so. It requires students to gather together and read English even though the undergraduate feels they cannot read English efficiently with others. As such, this undergraduate’s basic psychological need for competence in keeping their attendance record facilitates this undergraduate’s external motivation.

Consequences of Self-Determined and Extrinsic Motivation or Lack Thereof

The consequences that this study focuses on are associated with undergraduates’ psychological feelings about themselves, in addition to their attitudes and perceptions about the impacts of factors in the university environment on their self-determined and extrinsic motivations. Positive consequences result from undergraduates’ experiences of being self-determined to regulate their behaviours in acting out their choices, while negative consequences result from their experiences of non-self-determined behavioural regulation. If undergraduates’ implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivations by mediating the impacts of university environmental factors on these motivations, these undergraduates feel “good”. Their self-determined attempts to accomplish their integrated goals result in students’ experience of different feelings and consequences in different aspects of development. Students explained:

“I know where I am (what my level of academic English language is) by taking the CET 6 several times.”

“I improved how I mentally deal with challenges and failure by competing with others as part of a table tennis activity.”

“I gained a lot by taking part in activities, in terms of preparation for my future.”

One student said, “I valued myself more by taking part in activities in the Student Union”, realizing that she brought happiness to others.

In contrast, when they are not satisfied with the university environment, and feel that it cannot facilitate their self-determinations in acting out their choices, or they feel unsatisfied with what they have learnt and are concerned about whether they have prepared well enough for working, some undergraduates experience negative feelings, saying, “I do not feel like I’m doing very well”, “the class is torture, and I am easily distracted”. Others express that they have felt “disappointed and revolted”. The satisfaction of undergraduates’ implied basic psychological needs for competence and self-determination are not supported when they interpret the university environment this way, and they consequently experience negative affect.

Some undergraduates experienced negative consequences because they were unable to regulate their behaviours to accomplish their integrated goals. For example, some undergraduates whose integrated goal was to study in order to prepare well for working in Chinese society were not satisfied with what they had learnt in university and were concerned about whether they were sufficiently prepared:

“I don’t feel like I’m gaining anything from what I am learning at the university.”

“I feel out of touch with society and do not have opportunities to apply what I have learnt.”

“I do not think I am competent enough. I have definitely not reached the standard I expected to because I feel there are still a lot of things I needed to learn when I was doing my internship. Before I did the internship I did not know there would be so many things I would need to learn because I had no idea what society would be expecting. I only tried to finish the tasks and homework allocated by teachers and I learnt whatever the courses required. I am not sure whether what I have learnt at university can be applied in society. I think things will need to be learnt in practice as I go into society.”

“I feel it is something of a pity. I studied hard and I am at the top of the list in terms of my academic performance on exams but I still lack the experience of taking part in large activities or events. For example, I was not chosen to be one of the Olympic volunteers and I do not have the opportunity to go to specialized study-related conferences... I still expect that we will be provided with such opportunities in order to learn more and understand society. But I am not sure how the university will be able to make progress in providing such opportunities to students.”

In describing their negative emotions, these undergraduates present different motivations to attend university, including being prepared to working in Chinese

society in addition to doing well academically, and discuss how various aspects of their university experience have failed to facilitate the accomplishment of these goals.

Some undergraduates feel “pressured or stressed”, realizing that there is “fierce or unfair competition in hunting for jobs in Chinese society” according to their understanding of the current state of Chinese society. When they encounter tasks, they do what they “should do or are supposed to do”, and they “have got used to accepting what is required by teachers”. They try to maintain a “good psychological state” when they perceive differences between how they interpret the university environment and the reality of Chinese society. This is especially important as they realize that the university cannot provide them with opportunities to develop their working abilities or interpersonal skills to the standard that society expects. Instead, they perceive that often the university only focuses on facilitating academic study. In response, undergraduates depend on themselves by “reading books or making friends at university” if they are self-determined to develop their abilities. For example, students said:

“I think the university environment focuses on facilitating academic study or research mainly. Even though the activities provided here are good and various and the university looks a bit like a little society, it is still different from wider society. Having completed an internship for about a month off of campus, I realized that the knowledge I have learnt at university is different from the knowledge and skills required in society. It is not realistic to require the university to be like a society. I think the university should do what it is supposed to do. That is, the aspect of student academic development. I think no matter how much

the school tries to make itself similar to society, it is still different from the real world. It is not embedded in a real-world context and it just imitates it.”

“There is a gap between reality and my expectations of the course. The university is not supposed to be like this. I hoped I would be inspired for my future life while being here but I have not got this kind of inspiration. I only depend on myself to read the books I am interested in, to make as many friends as possible and to get along with my roommates in the dormitory.”

“I think the university works like a template, students come here and are educated in the same way. I know it is hard to improve the situation because there are too many students. The opportunity to obtain an internship is too rare. The internship that I took outside of university was really good, and provided me with practical training. As a result of the training, I know what I have to learn and what I will do in the future. It was really good but it is hard to get this kind of opportunity at university. A difference exists between the university environment and Chinese society.”

Some undergraduates realized that overall personal growth and development would need to depend on their own self-determination and effort, and opportunities for such development would not be sufficiently supported or influenced by the university environment.

Other undergraduates think they have developed personally not because of their experiences of self-determined behaviour to accomplish their integrated goals, but

because of the gradual influence of the university environment. Undergraduates perceive the environment as mainly helping develop their working abilities and interpersonal skills, but also their academic studying abilities. This development provides these undergraduates with the confidence they will need to work in Chinese society and gives them feelings of “being grown up” and having “become mature”. For example, four years of university experience provides fourth year undergraduates with feelings of confidence and competence:

“In general, I think I am more grown up and mature because of the four years I have spent at university. I have learnt a lot here especially in terms of interpersonal relationship skills when I mix with others in the dorm, during classes and in the wider university context. I will work in the near future and I think what I have learnt will be practically applicable. I think I am competent in finding a job or applying for a postgraduate programme.”

“The university is like a little society. I have gained more confidence. When I came to university as one of the freshers, I only took part in activities rather than organizing them. Then, as my role changed from member to organizer, I met more and different people and I learnt more. I am now confident in my abilities. I do not only follow others’ instructions.”

“I feel I have really developed my personality in my four years at this university. Previously, I was really sensitive and mean. Now I am more tolerant. In general, I have really grown up a lot. The most important part for me is still interpersonal relationships, and I have learnt a lot about that through living with my classmates and making friends... It

is an environment that provides opportunities to communicate with others, I have to say.”

“I am more mature in terms of my perspectives about things around me and I think university gave me the opportunities to mature in this way.”

“In terms of specialized academic study, I made some progress. Even though my progress is not so obvious, I have learnt a lot. I recall that in my first year I did not understand what I was supposed to know. Now I find it is easy to understand the meaning of words in books. I find that I have gained a lot in terms of working and grown up also. I was the student representative during my four years here. I contacted the teachers more frequently than other students. When I was working, I communicated with students as well and they provided me with lots of help. I accomplished what I thought I could not.”

It is important to note that it is not just self-determined pursuit of integrated goals that provided these undergraduates with personal development. Indeed, as these examples have shown, purely being in the university environment for four years provided opportunities for undergraduates’ personal development.

Undergraduates’ Implied Expectations of the University Environment in Facilitating their Self-determined and Extrinsic Motivations to Participate in University Activities and Academic Courses

As their basic psychological needs were implied in this study, undergraduates’ expectations of how the university environment might help satisfy their basic

psychological needs were also taken as implied. In general, to satisfy students' basic psychological needs, the school environment should provide "opportunities to develop their intellectual capacities, to experience a sense of competence and belonging, and to interact with supportive, non-parental adults" (Roeser & Midgley, 1996, p. 408). The opportunities afforded by the ideal school environment should help students succeed by "promoting a genuine enthusiasm for learning and accomplishment and a sense of volitional involvement in the educational enterprise (Deci et al. 1991, p. 325)".

How Expectations Were Implied

In their responses, undergraduates implied that they expected the university environment to be autonomy-supportive. This reading was taken based on the fact that when students interpreted the university environment as non-autonomy-supportive, their internalizations were hindered. This occurred because in these conditions, undergraduates' implied basic psychological needs for competence and relatedness, which mediated the impacts of university environmental factors on their self-determined and extrinsic motivations to participate in university activities and academic courses, could not facilitate these motivations.

Implied Expectations

Undergraduates expect environmental factors in the university such as learning resources and infrastructure to be autonomy-supportive because their impacts on students' self-determined and extrinsic motivation are mediated by their basic psychological needs for competence and self-determination in efficient learning of

academic knowledge. Their expectations of learning resources and infrastructure consist of:

“More independent study rooms and more seats in the library, more access to the Internet, updated video room facilities and a better research database.”

Undergraduates in the university also expect the university environment to provide opportunities for personal development, to make their own choices, and to set their own integrated goals because these are mediated by these undergraduates' implied basic psychological needs for competence and self-determination. For example, they expect to participate in interesting and useful courses rather than wasting their time on uninteresting or useless courses. Undergraduates expect opportunities to read English more effectively; in fact, the opportunity to be respected for their own learning decisions. For example, some students explained that:

“Teachers still supervise our Morning Reading activities. I think as we are already in university teachers should not interfere in such things. Different people have different ways of living. A group of people sitting together reading aloud in a classroom is really noisy and it is hard for me to concentrate on reading the English texts. It seems like all the students are reading but it is really ineffective.”

In the same vein, undergraduates expect that academic courses at university should not occupy too much time. Undergraduates expect more autonomy, “I think the school should let undergraduates have the right to choose whether they need to go to the

class or not” as they think some of their courses are not useful for their development.

In the academic domain, undergraduates expect environmental factors involved in the running of academic courses and activities to be autonomy-supportive because they are mediated by their implied basic psychological needs for competence and relatedness in “knowing more people by mixing with others in larger groups”, and in “learning English language” by “communicating with foreigners or English native speakers”. For example, as these students study in a foreign studies university which places a great emphasis on learning foreign languages and cultures, undergraduates expect opportunities to communicate with foreigners or to make presentations in English. One student said,

“I expect opportunities to communicate with English native speakers because I think that will be good for my specialized study of the English language.”

In terms of how academic classes are run, undergraduates also expect opportunities to learn in larger groups both in their core and elective classes in order to be able to communicate with other students more. This expectation especially marks a departure from the smaller class groups and less chances to communicate with other students that they experienced in primary and high school.

In addition to expecting the university learning resources and academic activity settings to be autonomy-supportive, undergraduates expect the same from the academic studying atmosphere and social activities because these are mediated by their implied basic psychological needs for competence in being motivated to study or

for being rewarded by participating in social activities. Students expect that the university will provide a “good atmosphere” that will motivate students to study. They consider that what distinguishes a “good” university from a “bad” university is that a good university motivates its students to study. Undergraduates also expect the university environment to contribute to their “academic studying and research development”. In addition, students expect university academic activities to be rewarding, to be developed “in quality and content”, and to “be tailored to undergraduates’ needs for personal development”.

In the social domain specifically, undergraduates expect the university to be autonomy-supportive in terms of the access it can provide to career-related information and internship opportunities. These are mediated by their implied basic psychological need for competence in understanding Chinese society and in “gaining work experience” as they do not think they will be able to find these opportunities by themselves. For example, one student said:

“I think the university should provide us with internship opportunities.

I do not want to search for these opportunities by myself so I think the university should provide some for us. They can paste internship information on the board and each student can apply and compete for it. I want the school to provide us with such information because internship information is not very accessible to students and because it is hard for students to compete for and obtain the internship even if we have this kind of information. The last reason is because we know little about the internship process; we lack the knowledge of internship. Nobody tells us about this and we do not have enough personal

experience... Sometimes, seminars on finding jobs are presented by university administrative staff rather than people who actually do that job and who have practical experience of finding a job in that field.”

Undergraduates expect the university to launch more special interest groups that can improve one’s abilities in preparation for their careers and that are connected with meeting the needs of working in Chinese society.

In the social domain, undergraduates expect the university to be autonomy-supportive in terms of how activities are run because these are mediated by students’ implied basic psychological need for competence in competing for participation in activities with others. For example,

“I expect the university to provide fairer opportunities for students like me. I’m not saying that I do not fight for a chance to participate but the opportunities provided by the university are for those people who are more capable comparatively. For example, when the clubs were recruiting new members, I went to the interviews but I failed. I hope to get more opportunities for people like me.”

Finally, undergraduates also expect the university to be autonomy-supportive in terms of how teachers inspire undergraduates to learn because this is mediated by their basic psychological need for competence in living to “enhance inner value” or “cultivate personal taste”. This is especially important as these undergraduates think that their university teachers are only capable of teaching course content but lack the ability to inspire students. For example, some undergraduates expect teachers to provide

“opportunities which can cultivate students’ taste and enhance undergraduates’ inner value, such as arts performance”. One student said:

“I think the teacher should have knowledge of literature, history and philosophy. If someone possesses these three aspects of knowledge, he/she is qualified no matter what course he/she is teaching, especially in the humanities. If teachers do not understand these three aspects of knowledge it is hard for them to teach the students well, and inspire them. Imparting knowledge should be embedded rather than dominate the class. For example, we learn English texts and I do not think it is good that the teachers just explain the words. If I want to learn words and grammar I can learn them by myself. In that case, why do I have to learn in the class and pay for the teachers?”

Students’ expectations that different features of the university environment should be autonomy-supportive indicate the mediating role of their implied basic psychological needs, what their integrated goals are, and how interpreting these features as autonomy-supportive can provide them with the self-determined and extrinsic motivation to participate in university activities.

Chinese undergraduates in the Department of Educational Technology at Tianjin Foreign Studies University possess various integrated goals which extrinsically motivate their participation in university activities and academic courses. Particularly, these undergraduates’ integrated goals were found to be associated with preparing to compete for jobs that will allow them to work with their intellects after graduation.

The results of data analysis and discussion legitimate the use of Self-Determination Theory within a Chinese context. In this study, undergraduates' basic psychological needs for competence and relatedness were shown to facilitate their self-determined and extrinsic participation in university activities and academic courses, and energize them to achieve their integrated goals. However, this only happens when the university environment is interpreted autonomy supportive by providing informational events. In this way, undergraduates' implied basic psychological needs for competence and relatedness mediated the impacts of factors in the university environment on their self-determined, extrinsic motivations. Aspects of the university environment were also shown to encourage undergraduates to set and pursue integrated goals. The results of data analysis and discussion legitimate SDT arguments with regard to when environmental factors are interpreted as non-autonomy-supportive also.

Overall, internal and external factors are shown to facilitate self-determined and extrinsic motivations to various university activities or academic courses. The consequences of accomplishing and failing to accomplish integrated goals were found to stem from negative to neutral to positive. The expectations of the university environment reveal these undergraduates' expectations in how academic courses and social activities were run and in how they were able to live their own lives and make their own decisions.

Chapter 5 Conclusion and Further Discussion

This chapter examines how well the results presented in the previous chapter answer the research questions guiding this study by revealing the findings of this study. Further discussion, implications, and directions for future research conclude the chapter.

5.1 Answers to Research Question One

The first research question asked, *what are the integrated goals Chinese university undergraduates possess for their self-determined and extrinsically motivated participation in various university activities or academic courses?* This question concerns the expressions of the Chinese undergraduates' self-determinations in pursuing their self-selected integrated goals in the Department of Educational Technology at Tianjin Foreign Studies University. The undergraduates are self-determined and extrinsically motivated to accomplish these goals, and therefore regulate their behaviours accordingly by participating in university activities or academic courses. Their self-determined and extrinsically motivation is facilitated by their basic psychological needs.

This study increases the awareness of the importance of contextual and cultural variables as factors that affect psychological processes. In this study, this process

occurs when contextual and cultural variables impact on goal content framing, which in turn facilitates motivation. In meta-analyses carried out by Deci et al. (1991, 2001), extrinsic rewards have consistently been found to have negative effects on intrinsic motivation. More specifically, Deci and Ryan (1991) suggest that extrinsic rewards undermine the learner's feelings of self-determination and their freedom of choice. However, these findings rest on the theoretical assumption within SDT that self-determination is the positive outcome of motivational development and one that all are expected to be achieved. Therefore any variables, such as extrinsic rewards or goals, which may undermine self-determination, are considered negative. However, given that Chinese self-construal is predominantly interdependent, individuals' motivations are almost always extrinsic. As part of this, their integrated goals will also be extrinsic. Therefore we cannot simply define extrinsic rewards or extrinsic integrated goals as entirely negative in the Chinese context. In the Chinese context, intrinsic and extrinsic are not defined as opposite ends of a single dimension, as either positive or negative. Rather the predominance of interdependent Chinese self-construal affects individuals' integrated goals and their achievement. For this reason, Chinese undergraduates may exhibit self-determination even when they are trying to accomplish extrinsic integrated goals, and even though their motivations to accomplish these goals are theoretically defined as non-self-determined.

In this study, the implications of pursuing different extrinsic goals are presented, in order to understand why Chinese individuals pursue extrinsic goals. Because Chinese self-construal is interdependent, they seek, and thus are motivated extrinsically by, the acceptance and respect of others. Pursuing wealth, social status and authority is valued in their society and thus is internalized by individuals, affecting motivation and achievement in daily lives. Underlying students' achievement at any one time are

a range of motivations, including satisfying one's need for achievement, enhancing one's self-confidence, obtaining recognition and approval, avoiding flunking out, obtaining the knowledge and skills necessary for a job in the future, showing that one excels in comparison with other students, avoiding criticism from parents or negative reactions from peers, etc. (e.g., Dweck, 1986; Harackiewicz et al., 1998; McKeachie, 1961; Pintrich, 2000). It is obvious from this non-exhaustive list that goals with an extrinsic focus are involved and impact on students' achievement.

Vansteenkiste et al. (2006) have postulated, however, that extrinsic goals are less likely than intrinsic goals to promote the satisfaction of basic psychological needs. Research shows that people with strong extrinsic aspirations have more difficulty fulfilling their needs for competence, relatedness, and autonomy (see Kasser, 2002; Kasser et al., 2004). However, given the predominance of such aspirations in the Chinese context and the uniqueness of individuals' consequently extrinsic integrated goals, it is important to examine how basic psychological needs are implied and potentially satisfied by students' reported extrinsic motivated goals.

The term integrated goals implies external, societal goals that have been adopted by the individual to become personal goals (Deci & Ryan, 1985, p. 156). These goals, provided either by the self or by significant others, are considered important for the individual to endorse because of their outcomes and social utility (Deci & Ryan, 1985, p. 137). Integrated goals initiate people's self-determined motivation. Only when people are motivated by integrated goals are they self-determined to initiate and regulate their behaviour (Deci & Ryan, 2002, p. 17). Given the uniqueness of extrinsic integrated goals, this study works to examine how they may be expressed by Chinese undergraduates, and how they in turn imply students' basic psychological needs. The

expressions of extrinsic integrated goals in Chinese undergraduate students' day-to-day stories provide the researcher and readers of this thesis with the opportunity to understand the meaning of each extrinsic integrated goal, in order to understand the direction and scope of these Chinese undergraduates' motivations. Indeed, SDT is ultimately concerned with the direction of motivation, and therefore when tested within this unique context, should examine how contextual or cultural variables give rise to unique forms of self-determined motivation.

The interviews indicated that some Chinese undergraduates are motivated to attain an integrated goal of finding a job that does not require "too much physical labour or too much thinking." In order to meet this goal, students are self-determined to develop their working abilities (e.g., those that will be valued in the future workplace) by cooperating with others, as well as their academic study ability and overall academic performance. They are therefore motivated to participate in university social activities such as those associated with the Student Union, or in English language studying, which are perceived as activities capable of developing these abilities. Those undergraduates who consider "job hunting" or "applying for postgraduate programmes" as the only reasons for studying at university admit that though they were "not enthusiastic about studying" in their first two years, when it comes time to start finding a job in their third and fourth years of study, they become self-determined to participate in university activities and do well on their academic courses.

The interviews also showed that some undergraduates express their self-determinations towards fields in which they may potentially work by devoting more energy to learning about these fields. Undergraduates who are self-determined

to work in certain fields are motivated to study well in related subjects at university. For example, in the Department of Educational Technology, undergraduates are provided with set courses in English language, computer science and educational theory and are likely to go on to work in English language education, educational psychology, or computer science. Though undergraduates cannot choose their courses, they can choose which of their courses they want to commit the most energy to and do their best in, based on their chosen career orientation. Sometimes, undergraduates in this department choose their career orientations on the basis of the academic courses provided. Others, who are self-determined to study business or economics, do not find related courses provided by this department and must study in the university library. This university is interpreted as autonomy-supportive as there are business- or economics-related books in the university library.

Opportunities that improve understanding of the academic knowledge required for future careers and help make career choices are important to undergraduates. Students with defined vocational choices are more likely to be overachievers and more likely to graduate from college (Heck & Weible, 1978). However, a common problem is illustrated by Yankelovich's study (1971), in which 1,244 college students were asked to choose from a wide variety of phrases that best described their present mood, and the choice selected by the majority of students (55%) was that they felt "confused about the future". Such uncertainty has an impact on self-concept. According to Heath (1968) a transitional stabilization of college students' self-concept occurs only when they think they know what their vocation is to be. In other words, if students lack knowledge about their potential careers, their self-concept development will not be stable. Often the greatest barrier first-year college students face in developing their own career plans and having command over their lives is a lack of in-depth

knowledge about any career (McClure & Buan, 1973). This lack of in-depth knowledge about careers is inevitable for Chinese undergraduates because they are rarely presented with opportunities to learn about careers given the extent of their concentration on gaining the highest possible academic scores on the Chinese College Entrance Examination. However, given that Chinese undergraduates' attitudes to higher education are influenced by Chinese traditional values and interdependent self-construal which depend on finding a job in which they can work with their intellect, this lack of in-depth career information while at high school provides undergraduates with the self-determination to find out more and develop themselves in order to meet the requirements of their future jobs and society.

Wanting to find a job and work competitively with their intellect when they graduate from university also provides some undergraduates with the self-determination to obtain qualifications and build up their interpersonal relationships. These undergraduates consider qualifications as proof that they are "hard-working people" and possess qualities that are accepted and respected by Chinese society, such as having good studying abilities. Undergraduates who understand Chinese society believe that decent jobs are obtained by having "significant references" and by building up interpersonal relationships while at university because they know that Chinese society prizes being accepted by others and social relationships. Focusing on the outcomes and social utility of building up interpersonal relationships, they adopt these characteristics as personally important integrated goals and are motivated by them to participate in related activities or courses. If the university does not provide such certificates or qualifications, these undergraduates are self-determined to participate in training courses off campus. Furthermore, they are self-determined to build up their interpersonal relationships by mixing with other undergraduates in their

class groups.

Undergraduates are self-determined to accomplish a range of other integrated goals. These include working rather than applying for postgraduate programmes after graduation; developing their academic study skills and performance in different ways; enhancing their personal growth; ensuring their life has variety; wanting to “experience more and know more” and experiencing new things. These integrated goals are of a greater variety than those students might have had before attending university, when they were constrained by the predominantly academic study goals necessary for attending university.

Undergraduates’ self-determinations to accomplish their different integrated goals facilitate their self-determined and extrinsic motivation to participate in various university activities or academic courses. Their self-determinations are not limited to academic study, but involve wanting to improve themselves and prepare for jobs after graduation. Academic study can be beneficial to competing with others to find jobs that enable working with one’s intellect after graduation. Undergraduates’ different self-determinations imply different representations of their implied basic psychological need for competence. For those undergraduates who possess self-determined, extrinsic motivation to develop their working abilities in preparation for work after graduation, this motivation is mediated by their implied basic psychological need for competence in developing their working abilities. However, satisfying their implied basic psychological need for competence in building up good interpersonal relationships is associated with their implied basic psychological need for relatedness. According to the analysis of these undergraduates’ responses, the implied basic psychological need for relatedness is not only associated with relating to

others but with the implied basic psychological need for competence in effectively functioning within Chinese society. Kasser and Ryan's (1996) attempt to conceptualize autonomy-supportive contexts for doing academic activities focused on the content of students' goals. They found that individuals' goals tend to be "intrinsic and growth-oriented" rather than "extrinsic and outward". In the Chinese university context, however, these undergraduates' self-determined integrated goals, which motivate them to participate in various university activities or academic courses, are extrinsic and growth-oriented. As a result, Chinese undergraduates' integrated goals, which they are self-determined to accomplish, can be seen as extrinsic, growth-oriented goals, and differ based on how much they value and perceive society to value, personal growth.

5.2 Answers to Research Question Two

The second research question informing this study asked, *how do implied basic psychological needs for competence and relatedness mediate the impact of university environmental factors on Chinese undergraduates' self-determined and extrinsic motivation to engage in various university activities or academic courses?* This question is addressed by analyzing these undergraduates' responses about their experiences of either being motivated to participate in various university activities or academic courses or not. Whether these experiences were facilitated or not depended on whether students interpreted the university environment as being autonomy-supportive or non-autonomy-supportive, respectively. Factors that were included in students' interpretations of the university environment as

autonomy-supportive were the nature of the settings of social activities, university academic courses and activities; teachers' encouragement, instructions and course delivery; the overall university studying atmosphere; and resource and information access. Reading these factors as autonomy-supportive necessitated undergraduates' indications that they were self-determined and extrinsically motivated to develop their communication skills, widen their personal views, develop their academic performance, develop interpersonal skills, understand their potential jobs and obtain a better grasp of Chinese society. Factors included in students' interpretations of the university environment as non-autonomy-supportive consisted of the nature of the settings of social activities and academic courses; teachers' behaviours; the overall university studying atmosphere; and dormitory management. Reading these factors as non-autonomy-supportive necessitated undergraduates' indications that they were self-determined and extrinsically motivated to do academic research, to learn English language well, to obtain a better grasp of Chinese society, to build up interpersonal relationships and to develop their working abilities.

5.2.1 The Autonomy Supportive University Environment

The impacts of the settings of social activities, as an environmental factor, on Chinese undergraduates' self-determined and extrinsic motivations are mediated by their implied basic psychological needs for competence and relatedness. This mediation occurs when the university environment provides autonomy support that facilitates the satisfaction of these undergraduates' implied basic psychological needs. In other words, if a student has an integrated goal that they are self-determined to accomplish,

and the environment is autonomy-supportive and allows for the satisfaction of their implied basic psychological needs for competence and relatedness, they will be able to pursue this integrated goal with self-determined, extrinsically motivated participation in university activities and academic courses. For example, in organizing social activities that give students chances to meet and get to know other people, the university provides them with autonomy they need to satisfy their associated needs for relatedness and competence, and enables their self-determined, extrinsically motivated participation in these activities in order to pursue their integrated goals of developing their interpersonal communication skills and widening their personal views.

The impacts of the settings of academic activities, as an environmental factor, on Chinese undergraduates' self-determined and extrinsic motivations are also mediated by their implied basic psychological needs for competence and relatedness. Given that academic studying and interpersonal relationships are valued by these undergraduates, the department will be considered autonomy-supportive if it provides those academic courses or activities which are beneficial for the development of undergraduates' academic study abilities and interpersonal skills, such as "doing research projects together." In this way, in the academic domain, undergraduates' implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivations to engage in academic activities.

The impacts of teachers' encouragement, instructions and course delivery, as an environmental factor, on undergraduates' self-determined and extrinsic motivations are mediated by their implied basic psychological need for competence in academic performance. When teachers reassure students about the significance of what they are

studying and of studying in general and students agree with their teacher, this supports their autonomy, satisfies their implied basic psychological need for competence, and motivates them to study. This also occurs when teachers in the Department of Educational Technology provide students with instructions on how to study efficiently and effectively.

The impacts of the environmental factors of studying resources and atmosphere on undergraduates' self-determined and extrinsic motivations are mediated by their implied basic psychological need for competence in academic performance. Students indicated that "the dean of this department emphasizes undergraduates' language studying". This meant that students had opportunities to participate in "free registered foreign language courses" and to use the "university library stock" for "searching language studying information and resources". These factors were supported students' autonomy and implied basic psychological need for academic competence, and provided them with self-determined, extrinsic motivation to use these resources and do well academically.

In a similar way, interpreting that the level of information access at the university was autonomy-supportive, satisfied the undergraduates' implied basic psychological need for competence in understanding potential jobs and Chinese society, and thereby mediated the impacts of this information access on undergraduates' self-determined and extrinsic motivation to participate in university organized seminars or lectures.

Interpreting the university environment as autonomy-supportive encourages undergraduates to set and pursue various integrated goals. These integrated goals, such as studying foreign languages and cultures well and excelling academically more

generally, are influenced by the emphasis on language studying in the university atmosphere, teachers' suggestions, and students' participation in social activities organized by the university, guide their self-determined and extrinsic motivations.

5.2.2 The Non-Autonomy-Supportive University Environment

When factors in the university environment are interpreted as non-autonomy-supportive, undergraduates' implied basic psychological needs for competence and relatedness cannot facilitate their self-determined, extrinsic motivation to participate in university activities and academic courses. As they are self-determined to participate in these activities and courses in order to accomplish their integrated goals, interpreting the environment as non-autonomy-supportive will prevent them from accomplishing these goals.

When the university environment is interpreted as non-autonomy-supportive because of its time management, undergraduates' implied basic psychological need for competence in developing their academic studying abilities cannot facilitate their self-determined and extrinsic motivation to complete academic research projects. For example, when undergraduates' day times are mostly occupied by classes and they are unable to do their research projects at night because "strict" dormitory rules mean dormitory gates are closed early, their implied basic psychological need for competence cannot be satisfied, and their self-determined and extrinsic motivation to engage in their academic research project is undermined. That most of undergraduates' time at university is occupied by classes is also interpreted as

non-autonomy-supportive, and means that undergraduates' implied basic psychological need for competence in studying English well cannot facilitate their self-determined and extrinsic motivation to sit in additional, advanced language courses.

When the university environment is interpreted as non-autonomy-supportive because of how social and academic activities are run or their content, undergraduates' implied basic psychological need for competence, in being informed about finding a job, understanding Chinese society, being able to "experience more, know more", building up interpersonal relationships, and studying foreign languages, cannot facilitate their self-determined and extrinsic motivations. Students' interpretation of the university environment as non-autonomy-supportive occurs: when job-related information activities do not provide guidance on finding jobs that is practical and informed by an understanding the current state of the job market and wider Chinese society; when undergraduates in specific departments are not provided with opportunities to participate in "big events" when the information access provided by university conferences or seminars is not relevant to undergraduates' lives; when it is difficult to make lasting and meaningful friendships by participating in university social activities; when undergraduates are not provided with internship opportunities; when undergraduates' day time is mostly occupied by classes and they do not have time to search for opportunities to obtain a better grasp of Chinese society or to sit in additional, advanced classes in a different language department to improve their language ability.

When students interpret the university environment as non-autonomy-supportive because teachers only teach "grammar and vocabulary" or are less professional

postgraduate students who are unable to inspire undergraduates, their implied basic psychological need for competence in practicing their English language knowledge or being inspired by their teachers cannot facilitate their self-determined and extrinsic motivation for achieving in their English language course. Additionally, when students are taught and assessed in a way that they consider to be non-autonomy-supportive, such as through being required to recite knowledge, their implied basic psychological need for competence in mastering content knowledge cannot facilitate their self-determined and extrinsic motivations.

Students interpret the atmosphere and the library resources of the university environment as non-autonomy-supportive. For example, students in a predominantly foreign-studies-based university who study science subjects such as mathematics and computer science are in the minority and often feel “weird” when they are studying in the library. In addition, the stock of books and database in the library, as well as Internet accessibility and the quality of the video room are not optimally suited to language studying. As a result, undergraduates’ implied basic psychological need for competence in studying science subjects or language subjects well cannot facilitate their self-determined and extrinsic motivations.

Interpreting specific features of the university environment as non-autonomy-supportive discourages undergraduates from setting and pursuing integrated goals. The specific environmental factors that prevent the setting and pursuit of integrated goals occur: when students consider their teachers’ consistently similar requirements and methods “boring”, cannot see the significance of completing their work, and find it “difficult to concentrate on the course”; when the content of the academic courses is too difficult to master; and when students cannot see the practical

significance of having done a course when it ends. As a result, these undergraduates' self-determined and extrinsic motivations to participate in such activities and academic courses are impeded.

5.3 Answers to the Research Question Three

The previous research question examined the consequences of students' interpretations of the university environment as autonomy- or non-autonomy-supportive, and found that implied basic psychological needs in the latter condition cannot facilitate students' self-determined and extrinsic motivations to participate in activities. This would normally mean that students would discontinue their participation in such activities or not participate in the first place. However, where these activities and courses are obligatory, and participation is necessary, students' implied basic psychological needs shift. The change in the role of implied basic psychological needs in this condition receives closer attention in the answer to the third research question, which asked, *if the university environment is not interpreted as being autonomy-supportive by the Chinese university undergraduates, how do the implied basic psychological needs for competence and relatedness facilitate these undergraduates' process of internalization in their activity and course participation?* Answering this question examines the change away from self-determined motivations to participate in various university activities and academic courses towards a non-self-determined type of extrinsic motivation.

When factors present in the university environment are interpreted as

non-autonomy-supportive, undergraduates' implied basic psychological needs for competence and relatedness cannot facilitate their self-determined and extrinsic motivations to engage in university activities and academic courses. Instead, undergraduates' implied basic psychological needs for competence and relatedness facilitate non-self-determined types of extrinsic, such as external and introjected, motivation. This change also involves a shift in the nature of the implied basic psychological needs for competence and relatedness, away from being able to facilitate self-determined and extrinsic motivations in line with integrated goals, and towards facilitating non-integrated goals.

In an environment interpreted as non-autonomy-supportive, where other team members do not share the same self-determination to accomplish goals inherent in working together cooperatively, undergraduates' implied basic psychological needs for competence and relatedness in being able to do this competently cannot facilitate their self-determined and extrinsic motivation to engage in team work. As a result, these implied needs shift to those used in accomplishing everyday academic tasks, and facilitate undergraduates' non-self-determined and extrinsic motivation to engage in team work.

In an environment interpreted as non-autonomy-supportive, where social activities fail to provide enough leadership opportunities in order to prepare for jobs after graduation, undergraduates' implied basic psychological need for competence in gaining such experience cannot facilitate their self-determined and extrinsic motivation to participate in social activities. As a result, these implied needs shift to those used in participating in social activities just to earn enough credits to obtain a scholarship, and facilitate undergraduates' non-self-determined and extrinsic

motivation (i.e., external motivation).

In an environment that students interpret as non-autonomy-supportive, where tasks and methods of assessment are repetitive and meaningless, undergraduates' implied basic psychological need for competence in learning and understanding course content cannot facilitate their self-determined and extrinsic motivation to fully engage in their learning. On some occasions, teachers' assessment requirements involve "reciting knowledge" rather than understanding it in depth or mastering content. In others, students strive for competence in reading English texts but then have to participate in an inefficient Morning Reading Activity where undergraduates all read at the same time and cannot hear their own voices. These conditions lead students' implied needs to shift to those used in doing the bare minimum, such as passing exams and keeping attendance records, and facilitate their non-self-determined and extrinsic motivation.

Thus, in answer to the third research question, within the Chinese university context and the wider framework of Self-Determination Theory, when university environmental factors fail to provide informational events that facilitate undergraduates' self-determined motivations, the environment is interpreted as non-autonomy-supportive, or *controlling*. In this situation, students' implied basic psychological needs for competence and relatedness shift from their role in mediating the impacts of these factors on undergraduates' self-determined and extrinsic motivations to a role in which they mediate the impacts of the environmental factors on students' motivation by facilitating non-self-determined types of motivation.

5.4 Other Results of this Study

A phenomenon is constructed of its constituent structures: in addition to the key causal mechanisms, studying the thoughts and feelings associated with the phenomenon can shed light on its operation. The explanation and discussion of each structure, based on analysis of undergraduates' responses during semi-structured interviews, helps examine the phenomenon under study, in this case, how Chinese undergraduates' implied basic psychological needs for competence and relatedness facilitate their self-determined and extrinsic motivations to participate in university activities and academic courses by mediating the impacts of factors in the university environment on these motivations. This study's answers to its main three research questions uncover and discuss the phenomenon's constituent structures: the expressions of these Chinese undergraduates' integrated goals; environmental factors that they consider autonomy-supportive; environmental factors that they consider non-autonomy-supportive; implied basic psychological needs for competence and relatedness facilitating undergraduates' self-determined and extrinsic motivations to participate in university activities and academic courses; implied basic psychological needs for competence and relatedness not facilitating undergraduates' self-determined regulations and their subsequent discontinued participation or failure to participate in the first place; implied basic psychological needs for competence and relatedness facilitating non-self-determined, external motivations or introjected motivations to participate in obligatory university activities and academic courses; and undergraduates shifting from being self-determined to accomplish their integrated goals towards pursuing non-integrated goals via external or introjected behavioural regulation.

Additional structures that constitute the phenomenon are discussed further (below), and include: personal and internal factors that influence whether students are self-determined or not; expectations of the university environment in terms of self-determined motivations; and consequences of being self-determined to accomplish integrated goals or not.

5.4.1 Internal Factors Influencing Undergraduates' Self-Determination

SDT emphasizes the environmental factors (i.e., autonomy-supportive vs. non-autonomy-supportive) influencing students' motivations mediated by basic psychological needs, but also postulates that there are personal factors influencing students' goals content framing and then their motivations. These personal factors include self-actualization, self-esteem, self-consciousness, resilience, and persistence (Deci & Ryan, 1985, more details, please see Literature Review). These undergraduates tell their stories via semi-structured interviews in an open system indicating personal factors influencing their self-determinations to accomplish their extrinsic integrated goals or not.

Personal internal factors that impede undergraduates' self-determined pursuit of their integrated goals include a shy personality, a lack of confidence, inability to effectively manage one's time,, attitudes to academic study, and beliefs about having unimportant roles in activities. There are also internal reasons that prevent the very setting of integrated goals, and consequently undergraduates' self-determined and extrinsically

motivated participation in university activities or academic courses. These include “Ding Xing Si Wei” and students’ lack of enthusiasm. Internal factors that facilitate undergraduates’ self-determined pursuit of their integrated goals include adaptability, an autonomy-oriented personality and the ability to manage one’s time effectively.

Undergraduates who tend to be “shy and easily nervous” might not dare to take part in performing arts activities even though they understand that such participation could help achieve their integrated goals to develop personal abilities. Some lack the confidence to actively pursue their integrated goals in such activities because they do not want to show others that they are incapable. Others lack the confidence to actively pursue their integrated goals in academic activities because they are afraid their level of competence (e.g., in the “ability to think logically”) will render the results they hope for (e.g., good academic performance) unattainable. Though the majority of students’ available time during the day is occupied by classes (e.g., an environmental factor), some students have the ability (e.g. internal factor) to allocate their time well in order to successfully pursue their integrated goals, whereas others lack this ability for effective time management. This hinders their ability to accomplish their integrated goals through self-determined and extrinsically motivated participation in university courses and activities. A further internal factor that can prevent first- and second-year undergraduates from actively pursuing their integrated goal of finding a job after university is their lack of a serious attitude to studying. Finally, perceiving that social activities fail to provide opportunities to instruct and lead others prevents students from pursuing their integrated goals through self-determined, extrinsically motivated participation in such activities.

“Ding Xing Si Wei”, or being narrow-minded, is fostered by the Chinese

examination-oriented education prior to university. It prevents undergraduates from even setting, let alone pursuing, integrated goals and from engaging in any sort of self-determined behaviour, because they have grown used to doing only what is required by their schoolteachers in terms of academics, and do not understand what they are expected to do outside of this or how to do it. Some undergraduates' personalities are characterised by a lack of enthusiasm. Participation in activities for them is "mood-dependent" rather than guided by integrated goals, and thus their behaviour is not guided by self-determinations for personal growth, postgraduate study or obtaining a job after graduation.

If undergraduates disagree with teachers' methods of course delivery or assessment and consider it unable to satisfy their academic needs, the ability to adapt through studying on their own supports their pursuit of the integrated goal for doing well academically. Undergraduates' ability to pursue their integrated goals is also supported by possessing an autonomy-oriented personality that is characterized by knowing what they want, being able to do this, and being good at decision-making. Finally, the internal factor of the ability to effectively manage one's limited extracurricular time also supports students' self-determined integrated goal pursuit.

5.4.2 Expectations of the University Environment in Terms of Self-Determined Motivations

Undergraduates' responses showed that they expected both academic and social aspects of the university environment to provide the autonomy they required to

achieve their integrated goals. From this, it was extrapolated that interpreting the university environment as autonomy-supportive could help satisfy their implied basic psychological needs. This process would then facilitate their self-determined and extrinsically motivated participation in activities and courses and enable them to accomplish their integrated goals.

In terms of expectations about their academics, undergraduates expect autonomy-supportive provision of learning resources and infrastructure, teachers' behaviours and general learning atmosphere. Undergraduates expect that they will have the appropriate amount and quality of learning resources and infrastructure. They expect the university schedule to allow them the chance to make their own lifestyle choices and learn what they need to do for personal growth, rather than be restricted to only doing what is required of them. Students expect their teachers and courses to provide them with: knowledge that is "useful", well-informed by "knowledge of literature, history and philosophy" and personally meaningful; inspiring teaching methods; opportunities to work with and learn from others; and opportunities to conduct research to develop and support their academic study. Overall, the university is expected to provide them with an atmosphere that motivates them to study.

Undergraduates also expect autonomy-support in their social activities. They expect activities to be well developed and relevant to their personal development and career-related needs, such that their participation in these activities is rewarded. As such, access to job-information and internship opportunities should be realistic and reflective of the job markets they will be entering. Students also expect that all students, not only the most capable, should be given opportunities to participate in

“club activities” and “big events”.

If students’ expectation that the university environment provide the autonomy support necessary for them to achieve their integrated goals did not match reality, undergraduates’ implied basic psychological needs would be unable to facilitate undergraduates’ self-determined and extrinsic motivations to participate in university activities and academic courses. As a result, they would be unable to accomplish their integrated goals.

5.4.3 Consequences of Being Self-determined to Accomplish Integrated Goals

Undergraduates’ feelings about themselves, or attitudes and perceptions about the impacts of factors in the university environment on their self-determined and extrinsic motivations indicated the consequences of being self-determined to accomplish one’s integrated goals or not. Positive or negative depended on whether undergraduates experienced being self-determined to regulate their behaviours in accomplishing their integrated goals or not. If, by mediating the impacts of university environmental factors on their self-determined, extrinsic motivation, undergraduates’ implied basic psychological needs for competence and relatedness could facilitate these motivations, undergraduates would experience positive affect, and feel “good”. When the environment did not satisfy undergraduates’ autonomy, it also failed to support the satisfaction of their implied basic psychological needs for competence and self-determination. This prevented undergraduates from feeling satisfied with what they had learnt and made them feel as if they were insufficiently prepared for working

in Chinese society. As a result, their self-determined behaviour was prevented, they experienced negative affect and they claimed, “I do not feel like I’m doing very well” and “the class is torture, and I am easily distracted”.

However, not all the consequences of being self-determined to achieve one’s integrated goals or not are positive or negative; some are neutral. Some students, when confronted with a fiercely competitive job market and often an inability for the university to be able to provide appropriate work experience that enhances their interpersonal skills, just accept it, do what they need to do, and try to maintain a “good psychological state”. Their acknowledgment and acceptance of this difference means that they only expect the university to facilitate their academic study. For all other abilities and skills required by society, they depend on their own initiative by “reading books or making friends at university”, if they are self-determined to develop these aspects.

Neutral acknowledgment and acceptance of this difference can be considered within the framework of Bhaskar’s transformational model of social activity (TMSA), which lies at the core of his social ontology, and suggests two opposite conceptions, humanism and structuralism (Collier, 1994, p. 141). Humanism focuses on human agency and structuralism on the prevailing social structure (Collier, 1994, p. 141). While Bhaskar suggests that the structure of society is constructed by relationships among different human social roles (e.g., “one is a student only because of one’s relation to a teacher”), Collier (1994, p. 143) unites humanism and structuralism by arguing that people construct societies and societies construct people. Societies are composed of the relationships between people and the possible outcomes of these relationships; the social context determines which actions are possible and what the

possible outcomes will be (Collier, 1994, p. 145). Given that critical realism considers reality to be stratified and differentiated (Danermark et al. 2002, p. 21) and characterized by different mechanisms (Collier, 1994, p. 147), and that social science is concerned with structural explanations as a network of relations while psychological science is concerned with human intentional action (Collier, 1994, p. 147), this interpretive case study considers human intentional action (i.e., implied basic psychological needs facilitating self-determined and extrinsic motivations to participate in university activities and academic courses) on one level, and structural explanation at the second level (i.e., when Chinese undergraduates explain their intentions, or self-determined integrated goals). Actions (i.e., self-determined participatory behaviours) and their outcomes (i.e., whether integrated goals are accomplished) within the university environment are determined by the university social context (i.e., whether it is interpreted as autonomy-supportive). As undergraduates explain the intentions for their actions, the structural explanation, even only at the second level, becomes apparent in determining undergraduates' actions and their outcomes depending on relevant mechanisms. Given that the social context in the Chinese university is different from that of Chinese society, and that it therefore determines different actions and outcomes, if undergraduates' intentional actions are determined by the social context of Chinese society rather than of their university, it will be difficult for these undergraduates' intentional actions to proceed in the ways they expect while they are at university.

A positive consequence, albeit one that students do not associate with self-determined integrated goal pursuit at all, occurs when students associate their personal development with being influenced gradually by the university environment. The perceived personal development involves gaining improved working abilities and

interpersonal skills, in addition to academic study abilities, and increases their confidence in working in Chinese society. It also gives them feelings of “being grown up” and having “become mature”. It is difficult to distinguish which aspects of development while at university occur as a result of experience of the university and which aspects are due to students’ natural maturation processes (Dial-Driver, 1990, p. 9). Plant (1962; 1965 cited in Dial-Driver, 1990, p. 9) suggests that such a distinction be considered in terms of whether the university provides facilitating effects rather than unique effects on students’ development. In terms of this distinction, the development of the students within this study can be understood as occurring as part of their natural personality development, with the university environment playing a contributory role.

5.5 General Conclusion

This study qualitatively examines the integrated sequence of environmental factors, basic psychological needs, motivation and consequences using an interpretive case study approach, previously unused in SDT research. How undergraduates’ stories are interpreted and analyzed depends on the theoretical propositions that originate in SDT and guide this study (for more details, see Theoretical Propositions, Section 3.2.1). This study examines how the basic psychological needs at the heart of SDT interact with environmental factors and motivations within a Chinese university.

Grouzet et al. (2004) conducted the only quantitative SDT study to examine this integrated sequence at a situational level. Environmental factors were manipulated by

Grouzet and colleagues so that study participants were allocated to either a success or failure condition of performing the NINA task (i.e., finding the word NINA embedded in drawings). Perceptions of competence and autonomy, self-determined situational motivation, and concentration and intentions for future persistence on NINA (i.e., motivational consequences) were measured. The results of Grouzet et al.'s (2004) study revealed that condition, either success or failure, influenced perceptions of competence and autonomy, which affected situated self-determined motivation. In turn, motivation predicted concentration and future behavioral intentions. However, Grouzet et al.'s (2004) study involved manipulating environmental factors to observe the integrated sequence rather than examining it in an open system where study participants would have the autonomy to choose what they possessed the self-determined motivation to do. Measuring study participants' perceptions of autonomy but assigning a task these participants must accomplish is logically contradictory. In this study, participants are questioned qualitatively regarding the tasks and activities in which they already exercise self-determined motivation, either through participation or expected participation. By allowing for the examination of the integrated sequence in an open system, the use of a qualitative approach therefore provides an advantage to studying SDT.

In this interpretive case study, undergraduates' story-telling provides the narrative for interpretation. For example, one undergraduate's story mentioned that, in the academic domain, the provision of interesting and worthwhile academic activities and courses is interpreted by students as an informational event, as it provides opportunities to accumulate knowledge and enhance academic competence. Through such informational events, the university environment can be interpreted as autonomy-supportive; it allows for the satisfaction of the implied basic psychological

need for competence, by providing opportunities for students' self-determined motivation to accumulate academic competence, as well as for relatedness, by helping them appear more competent to others and being accepted and respected for this. In more detail, the implied basic psychological need for competence is implied by the student's mention of wanting to accumulate academic competence. When the university can provide interesting and worthwhile academic activities and courses, the university is interpreted as autonomy-supportive and can facilitate this undergraduate's wish to accumulate academic competence. Consequently, as this undergraduate's need for academic competence can be satisfied, they can be respected and accepted by others, thereby satisfying their need for relatedness and motivating them to participate in the academic activity or course.

This interpretive case study examines the interactive relationship by focusing on each activity or academic course. Through this process, the researcher and the readers of this thesis may come to understand how basic psychological needs interact with motivations and environmental factors in terms of one activity or academic course. In other words, which and how environmental factors influence the satisfaction of basic psychological needs and consequently which and how these facilitate undergraduates' motivations can be revealed. This can provide suggestions for developing university environmental factors so that they can be interpreted as autonomy-supportive, help facilitate the satisfaction of students' basic psychological needs, and facilitate their motivation for one activity or academic course specifically. This interpretive case study provides examples about the courses and activities undergraduates are self-determined and extrinsically motivated to participate in, about how basic psychological needs being expressed or operate in a Chinese context, and about the environmental factors in this Chinese university are interpreted as

autonomy-supportive or non-autonomy-supportive. This study does not provide suggestions about how to develop environmental factors so that will be interpreted as autonomy-supportive. However, it makes a contribution in providing rich examples of each sequence and also which environmental factors interpreted as autonomy-supportive, using a case study approach to interpret undergraduates' stories of the mediating role of basic psychological needs within the framework of SDT and the context of their Chinese university. Presenting these sequences may provide other researchers with a basis for further research on how to develop environmental factors that will be interpreted as autonomy-supportive at the situational level.

The stories told by the undergraduates provide a means through which the phenomenon can be examined. Stories provide one form of narrative, and comprise a skeletal description of the fundamental events in a natural, logical order (Franzosi, 1998, p. 519). Narrative texts such as the stories in this study are important in that they can provide empirical sociological evidence in a unique narrative form. They can be subjected to narrative analysis, with a few lines implying a wealth of hidden sociology (Franzosi, 1998, p. 519). This is required in this study given its emphasis on the contextual and wider impact of being situated within Chinese society on the undergraduates' motivations and their expressions of basic psychological needs.

Embedded in the lives of the ordinary, the marginalized, and the muted, personal narrative responds to the disintegration of master narratives as people make sense of experience, claim identities, and “get a life” by telling and writing their stories.

(Langellier, 2001, p. 700)

Narratives are useful in research because storytellers interpret the past rather than reproduce it (Riessman, 2000). These interpretations of the past imparted as stories are actually the processed re-imaginings of storytellers' (i.e., study participants') lives (Riessman, 2000). In this study, the re-imagination of storytellers' lives is interpreted as forging connections between personal biography and an external social structure – the personal and the social practice (Mills, 1959). This forging of connections, which can be considered the sociology underpinning storytellers' narrative lines, allows for the ability to see the gaps between current and desirable university policy and practice. This sociology is present when undergraduates' narrative stories describe the structures of the phenomenon under study. When these stories are analyzed, through thematic analysis which is appropriate to the analysis of narrative, this analysis can isolate, organize, and describe these structures.

This study reveals that Chinese undergraduates in the Department of Educational Technology at Tianjin Foreign Studies University possess integrated goals which extrinsically motivate their participation in university activities and academic courses. Students' integrated goals were shown to energize their implied basic psychological needs for competence or relatedness, or a combination of the two, and include developing their working abilities, working in specific fields in the future, developing their academic ability and performance, developing their interpersonal skills, and enhancing their personal growth by widening their experience (in terms of more, and more varied, experiences). These undergraduates' integrated goals were found to be associated with preparing to compete for jobs that will allow them to work with their intellects after graduation.

By applying the overarching framework of Self-Determination Theory (SDT) to a new population, the findings of this interpretive case study provide four contributions to SDT. The first is by showing how the individuals within this new context, the undergraduates at university in a society that is characterized by interdependent self-construal and where individuals actively seek the acceptance and respect of their society, heavily emphasized the importance of developing their competence in interpersonal skills. Given Chinese people's interdependent self-construal, being respected and accepted by others is highly valued. The integrated goal of developing one's competence in interpersonal skills reflects this impact of wider Chinese society on Chinese undergraduates. Even though how integrated goals are framed is varied according to the interpretation of undergraduates' different narratives, developing competence in interpersonal skills characterizes the main orientation of Chinese integrated goals and facilitates the interviewed students' extrinsic, self-determined motivation to participate in activities and academic courses.

The second contribution is an increased range of examples within this new context of how basic psychological needs for competence and relatedness facilitate the internalization process. Basic psychological needs have been defined as competence, relatedness and autonomy within the SDT framework and can be presented culturally according to different social contexts (for more details, see Literature Review). This study provides rich examples of how basic psychological needs for competence and relatedness are implied through the undergraduates' integrated goals at this Chinese university. The meanings of basic psychological needs for competence and relatedness are implied in the stories undergraduates told about their experiences. For example, if an undergraduate mentioned that they were self-determined to participate in an activity or academic course in order to develop their competence at interpersonal

skills, their basic psychological need for competence would be implied or presented in the form of competence for interpersonal skills. These expressions of implied basic psychological needs were interpreted by the researcher and provide cultural and contextual explanations of the meaning of basic psychological needs in the context of this Chinese university.

The third contribution this study makes is the recommendation that categorizing participants' goals to different types of regulation inherent in the internalization process should take the research context into consideration. Self-Determination Theory (SDT) distinguishes self-determined motivations from non-self-determined motivations (i.e., external and introjected regulation) along the internalization continuum. In this study, however, some items that SDT would group under introjected regulation were instead moved to the identified regulation group, and thus transformed into self-determined extrinsic goals because of how they were presented by undergraduates within the Chinese university context. They still fit with how integrated goals are defined, in that these goals were considered personally important in terms of their outcomes and social utility, such as "being accepted by others for doing a good job", "showing others how I am capable of doing it" or "to prove that I worked hard during my university years" but they also implicated a traditional sensitivity to acceptance and duties to others, suggesting that categorizing students' goals should take context into account.

The fourth contribution this study makes rests on it being the only qualitative study within the SDT framework examining the integrated sequence of environmental factors, basic psychological needs, self-determined motivations and consequences. This interpretive case study examines this integrated sequence by interpreting the

study participants' day-to-day stories. These day-to-day stories describe what courses or activities the undergraduates are self-determined to participate in, express their integrated goals thereby implying their basic psychological needs for relatedness and competence, and show how environmental factors and personal factors influence their motivation. The narratives within these stories provide rich examples of the integrated sequence, as well as insights into the sociology underpinning them (Riessman, 2000). This sociology, which connects personal biography and external social structures (Riessman, 2000), presents how wider Chinese societal values impact on the framing of participants' integrated goals, their expressions of basic psychological needs, and their interpretations of whether the university environment facilitates their self-determined motivations or not.

The findings of this study legitimate the use of Self-Determination Theory within a Chinese context. In line with arguments within SDT, in this study, undergraduates' basic psychological needs for competence and relatedness were shown to facilitate their self-determined and extrinsic participation in university activities and academic courses, and help them to achieve their integrated goals. However, this was only shown to be the case when the university environment provided informational events that helped undergraduates to interpret it as autonomy-supportive. In this way, undergraduates' implied basic psychological needs for competence and relatedness mediated the impacts of factors in the university environment on their self-determined, extrinsic motivations. In other words, interpreting environmental factors as autonomy-supportive facilitated the satisfaction of the undergraduates' implied basic psychological needs, which in turn facilitated self-determined, extrinsic motivation and the accomplishment of self-selected integrated goals. Aspects of the university environment were also shown to encourage undergraduates to set and pursue

integrated goals.

The findings of this study also legitimated SDT arguments with regard to when environmental factors are interpreted as non-autonomy-supportive. In line with arguments within SDT, in this study, when factors in the university environment were interpreted as controlling or non-autonomy-supportive, undergraduates' implied basic psychological needs for competence and relatedness were shown to be unable to facilitate self-determined type of extrinsic motivations. Undergraduates' implied basic psychological needs for competence and relatedness mediated the impacts of controlling factors in the university environment on their self-determined, extrinsic motivations. In other words, interpreting environmental factors as non-autonomy-supportive failed to facilitate the satisfaction of the undergraduates' implied basic psychological needs, which in turn left them unable to facilitate their self-determined, extrinsic motivation and to fulfil their integrated goals. Aspects of the university environment were also shown to discourage undergraduates from setting and pursuing integrated goals. As a result, instead of facilitating undergraduates' self-determined, extrinsic motivation to participate in university activities and academic courses, interpreting the university environment as controlling meant that undergraduates' implied basic psychological needs for competence and relatedness in fact shifted to facilitating their non-self-determined extrinsic motivation.

Overall, the study found that certain internal and personal factors facilitate while others impede undergraduates' self-determinations in setting and pursuing integrated goals. The study also found that undergraduates expected the university environment to be autonomy-supportive both in how academic courses and social activities were

run and in how they were able to live their own lives and make their own decisions. The consequences of accomplishing and failing to accomplish integrated goals were found to range from negative to neutral to positive, and were most positive when environmental factors were interpreted as autonomy-supportive and students' implied basic psychological needs facilitated their self-determined and extrinsically motivated participation in university courses and activities such that they were able to pursue their self-selected integrated goals.

5.6 Implications and Future Research

The findings of this study have several implications for practice and future research. These relate to what can be done to promote autonomy support in the university environment and the individual. Given that interpreting the university environment as autonomy-supportive facilitates the satisfaction of undergraduates' implied basic psychological needs, and in enabling their self-determined extrinsic motivation to participate in university activities and courses, helps them accomplish their integrated goals and obtain positive affect, the main implication is that universities should ensure that student learning environments are autonomy-supportive. This study has highlighted some of those environmental factors that undergraduates expect to be autonomy-supportive, which are to be promoted, in addition to those they consider controlling, which are to be addressed. Though the factors mentioned by the undergraduates in this study do not form a comprehensive list of aspects of the university environment that deserve careful consideration, they provide a good starting point, especially to researchers or university administrators who are interested

in how to develop autonomy-supportive environmental factors in the Chinese social context. This would help students with integrated goals, and encourage those who do not, to set and pursue them, facilitating their motivations. In terms of internal and personal factors that were implicated in the success or failure to accomplish undergraduates' integrated goals, future research should examine how to encourage the development of those factors that facilitate integrated goal pursuit, such as adaptability, an autonomy-oriented personality, and effective time management, and address those that hinder it, such as “Ding Xing Si Wei” and ineffective time management.

Participants' narratives provided an insight into the social meanings underpinning their motivations, and in doing so, highlight how the integrated sequence of environmental factors and integrated goals operates. Within each narrative are clues about an underlying sociology that connects personal biography with social structure, and in the current study specifically, indicates the impact of Chinese politics and culture on personal perspectives (Mills, 1959). In particular, this wider social context transforms undergraduates' integrated goals into extrinsic integrated goals. Traditionally, Chinese society has been described as official-oriented, meaning that Chinese young people were often expected to become officials because it led to wealth, authority and social position (for more details, see Literature Review). Today, although young people may not be expected to become officials, their pursuit of wealth, authority and elevated social standing is still expected, and thus contributes to the formation of extrinsic integrated goals. Within this societal context, Chinese undergraduates' interdependent self-construal also contributes, and means that these students value and pursue the respect and acceptance of their peers on a daily basis, because they reflect the wider Chinese integrated goals of pursuing wealth, authority

and social position. This study focuses on Chinese undergraduates' extrinsic and self-determined motivations rather than their intrinsic motivations because of this strong interaction between cultural values and expectations, interdependent self-construal, and students' integrated goals. The impact of the wider Chinese social context on how Chinese undergraduates frame their daily integrated goals implies that general motivations can impact on contextual and situated motivations, as has been theorized according to SDT (for more details, see Literature Review; Deci & Ryan, 1985, 2002). In the Chinese social context, Chinese undergraduates' general motivations for pursuing wealth, authority and social position influence their situated motivations at university. For example, some undergraduates are extrinsically motivated to study a subject because it will be advantageous in helping them find a respectable job, not because they are interested in the subject. Esteemed jobs are those that do not require physical labor and thus engaging in studies that hone the intellect is likely to help students be better respected and accepted by Chinese society. Accordingly, factors in the university environment are interpreted as autonomy-supportive when they support the undergraduates' pursuit of their extrinsic integrated goals. Environmental factors within Chinese society influence students general and daily motivations, which results in the formation of extrinsic integrated goals, which can then be pursued if the university environment is interpreted as autonomy-supportive. In this way, the revealed relationship between integrated goals and environmental factors implies the integrated sequence studied in this research.

Except for recommending that environmental factors within universities are developed so that they can be interpreted by students as autonomy-supportive in order to facilitate their motivation, this study is more concerned about the necessity and significance of how environmental factors may be interpreted as autonomy-supportive

within the Chinese context. In this Chinese university, undergraduates interpret university environmental factors as non-autonomy-supportive because they cannot facilitate their extrinsic integrated goals, such as developing the work-relevant competencies or practical skills that will help them find jobs. Bhaskar's transformational model of social activity (TMSA, Collier, 1994, p. 143) posits that people construct societies and societies construct people, which is important here because it means that the structure of society is constructed by relationships among different human social roles (e.g., "one is a student only because of one's relation to a teacher"). Because societies are composed of the relationships between people and the possible outcomes of these relationships, the social context determines which actions are possible and what the possible outcomes will be (Collier, 1994, p. 145). In the context of this Chinese university as a society, actions, such as self-determined participatory behaviors, and their outcomes, such as whether integrated goals are accomplished, are determined by the university social context, for example, whether the environment is interpreted as autonomy-supportive. Given that the social context in the Chinese university is different from that of Chinese society, and that it therefore determines different actions and outcomes, if undergraduates' intentional actions are determined by the social context of Chinese society rather than that of their university, it will be difficult for students to proceed with their intentions in the ways they expect to while at university.

The aims of Chinese Higher Education are articulated in the Higher Education Law of the People's Republic of China¹. This was adopted at the Fourth Session of the Standing Committee of the Ninth National People's Congress on August 29, 1998, disseminated via Order No. 7 of the President of the People's Republic of China on

¹ http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_2803/200905/48454.html

the same day and effective as of January 1, 1999. Article 5 of the Higher Education Law of the People's Republic of China specifies the task of higher education: to train people to become senior specialists imbued with the spirit of creativeness and practical abilities, to develop science, technology and culture and to promote the socialist modernization drive. Universities and colleges are the main sites for accomplishing this. Deci et al. (1991, p. 325) define the ideal school system as one that helps students succeed by “promoting a genuine enthusiasm for learning and accomplishment and a sense of volitional involvement in the educational enterprise”. It is apparent that neither Chinese Higher Education nor the ideal school system defined by SDT researchers requires schools or universities to serve purely for occupational outcomes. However, contemporary Chinese university practice is mostly influenced by undergraduates’ perceived need to spend their university years practicing and developing work-relevant competencies so that they will be able to obtain a job that requires intellectual work upon graduation and therefore the respect and acceptance of others. In order to cater to these needs, the current study at TFSU found that this Chinese university organizes social activities and seminars about competency building and job hunting. However, students in this study often claimed that the university could only provide these workshops to a superficial level. This is because they placed the responsibility for this in wider Chinese society rather than universities or colleges. In other words, work-relevant competencies or working skills can be developed or practiced in better situation when students are working within wider society rather than when sitting in a seminar about how to find a job. At university, it is currently difficult for undergraduates to fulfill their job-relevant development according to these study undergraduates’ story-telling. The implication is that if Chinese universities continue to cater to undergraduates’ needs for developing work-relevant abilities, this effort will be in vain. It results from that universities

require outcomes that are different from what society requires when universities do not serve purely for occupational outcomes according to Higher Education Law of the People's Republic of China and the concept of ideal school system suggested by Deci et al. (1991). This is why some Chinese undergraduates in the study accepted the reality that they would not be able to develop working abilities while at university and that universities would instead contribute to the development of their academic research abilities. This also implies that universities should be stricter in developing their practice according to the aims of Chinese Higher Education in educational enterprise rather than try also to superficially cater to their undergraduates' work-relevant social needs.

The education provided by Chinese universities does not have to be entirely divorced from wider societal demands for qualified and competent people, especially if universities are to accomplish the task assigned them by the Higher Education Law of the People's Republic of China. In fact, Chinese higher education institutions are strictly instructed by the Education Law of the People's Republic of China to provide a stock of competent and qualified people, by inspiring in students a creative spirit and helping them to exercise their practical abilities while at university. The current research therefore recommends that institutions of higher education do so by promoting a genuine enthusiasm for learning and accomplishment and a sense of volitional involvement in the educational enterprise (Deci et al., 1991) rather than focusing on readying students for entry into the workforce by practicing their working skills or abilities. If these undergraduates become more creative and practically proficient through self-determined participation in courses and activities that will build these skills at university, they will be ready and able to apply these competencies in the workplace when they graduate, thus allowing them to fulfill their

extrinsic integrated goals and the universities to fulfill their own task as set out by law.

Chapter 6 Limitations and Other Future Research

Overall, this study of Chinese university undergraduates' self-determined and extrinsic motivations had three limitations. This short chapter lists these limitations, discusses their impact on the research, and provides recommendations for how future research could address these limitations.

The first limitation of this study is that findings were not compared across the different years of study. Given that the different years of study were associated with different ages, the first-, second-, and fourth-year undergraduates may have varied in terms of how their implied basic psychological needs for competence and relatedness mediated the impacts of factors in the university environment on their self-determined and extrinsic motivations to participate in university activities and academic courses. Though Chandler and Connell (1984) have shown that internalized responses are positively related with age for children, more research must be conducted to determine if this is the case with differences in internalization across different university years and age groups. Research conducted by Lepper and colleagues (Lepper et al., 2005) suggests that there are few differences across grade levels (i.e., ages) in terms of extrinsic motivation and that extrinsic motivation is negatively correlated with academic outcomes. However, they do not indicate which type of extrinsic motivation they are using in their study, leaving it unclear as to whether it is non-self-determined or self-determined extrinsic motivation that does not change much across grade levels. In future, qualitative research that might compensate for

this would need to compare these different types of extrinsic motivation across different ages or year groups and assess how students' implied basic psychological needs facilitate their internalization. This would also provide a more comprehensive understanding of how these needs mediate environmental factors across different year groups.

The second limitation of the study is that the researcher did not investigate whether the mediating roles of implied basic psychological needs varied across the social, academic, and physical domains. This could have been done in depth by analyzing the characteristics of activities with respect to each domain. For example, Wentzel and Wigfield (1998) examined the influences of social and academic motivation on students' academic performance and considered the relationship between the types of motivations in the two domains. They found them to exist together in an interactive relationship in which they competed for students' psychological resources (Wentzel & Wigfield, 1998). Similarly, Ryan and Connell's (1989) perceived locus of causality model emerged from examinations of children's reasons for regulating their behaviours in both the academic and pro-social domains. These studies imply that motivation possess different characteristics in each domain. In addition, as Ryan and Connell's (1989) validation of the regulation items within the perceived locus of causality model was conducted quantitatively, research building on the current study could validate the perceived locus of causality model adapted for the Chinese university context by use quantitative methods in doing so.

The third limitation of this study is associated with the interpretive case study sample. Sampling in case studies is carried out purposively as participants are selected only if they have experiences of the phenomenon under study (Yin, 1994). In this study,

instead of taking a representative sample from all the departments at the university, the sample was convenient, and taken from only one department. This impedes the generalizability of the study to some degree. For example, the study participants were only able to provide information about their self-determined and extrinsic motivations to participate in academic courses within the Department of Educational Technology. Given that academic courses are likely to be run differently across departments, what undergraduates were able to say about the extent to which the university environment was autonomy-supportive will be limited, and is likely to be unrepresentative of the experiences of students in other departments at the university.

The Ending of this Thesis

While studying for her undergraduate degree at Tianjin Foreign Studies University, the researcher of this study was confused about potential job and development opportunities. She was not satisfied with the university because it did not facilitate her self-determination for personal development. Her confusion and disappointment inspired this thesis. Over the four and a half years it took to write, the researcher came to understand the origins of her confusion and disappointment by reading through relevant literature, talking to study participants, understanding their experiences, and widening and deepening her own thinking. She understood that the confusion and dissatisfaction she had experienced resulted from a failure to satisfy her implied basic psychological needs. This long and marvelous journey has provided the researcher with direction and a better understanding of her own life. She hopes readers of this thesis will find it rewarding in the same way.

Appendices

Appendix A: Description of Activities

Activity Type	Activity Domain	Activity Name	Activity Description
University-wide	Social	Career Development Association (CDA)	The CDA was launched and is organized by students. It is under the administration of Chinese Communist Youth League at the university. CDA provides careers information and opportunities to enhance desired competencies by organizing activities and professional training. Members can participate in activities such as Career Planning Seminars, relevant associated contests, internship, etc.
	Social	Communist Party	The Communist Party is the dominant political party in China and each Chinese citizen can join it if it reflects their personal political beliefs. Candidates must participate in Communist Party lectures, write reports and pass the relevant assessment (i.e., involvement in Communist Party Activities).
	Social	Scholarship Competition	Students at this university compete for scholarships because they bring money and honour. Success in obtaining a scholarship depends on performance in Comprehensive assessment, which includes students' academic performance, participation in activities, and their attendance record.
	Social	Honesty and Credit Club (HCC)	HCC is a Student Union club that works to ensure integrity and honesty among students by carrying out investigations. They investigate primary, high school and university students in terms of cheating on exams, plagiarism, resumé authenticity and how to identify the authenticity

			of job contracts.
	Social	Loving Care Club (LCC)	LCC is a Student Union club. The LCC organizes activities that prize loving and caring for others. Activities include visiting the elderly at Tianjin Aged Caring Centre, raising money for a student who was poor and had leukaemia, communicating with primary and high school students in order to provide advice and guidance.
	Social	Arts Festival	Students participate in the University Arts Festival by performing or singing on the stage or enjoying the performances of others.
	Social	Singing Contest	Students compete by class and sing together to vie for class honour.
	Social	Youth Volunteer Association (YVA)	YVA is under the administration of the Tianjin Communist Youth League. Members of the YVA volunteer in various fields in Tianjin. YVA aims to provide volunteers with big social events and charity activities; services for those with special needs; to train new YVA members; instruct members from different fields and organize relevant activities; to organize international communication events; and provide rescue services in major disasters and serious crises. YVA in Tianjin Foreign Studies University contributes by carrying out foreign language interpretation and providing volunteers for Tianjin social events and activities, such as the 6 th Asian and Europe Finance Ministers' Meeting in 2005, the Women's Football World Cup in China in 2007, the Beijing Olympic Games in 2008, etc.
	Academic	General Selective Courses	General Selective Courses are optional courses provided by the university. Students take them to obtain course credit toward their degree.
	Academic	English Speech Contest (ESC)	ESC aims to develop the level and quality of university English language teaching and learning, in order to develop students' interest

			and enthusiasm for English language learning and develop their practical language ability. The university winners of the contest (at Tianjin Foreign Studies University) go on to compete in the nationwide English Speech Final Contest.
	Academic	National English Contest for College Students (NECCS)	The university takes part in NECCS, a nationwide English contest that tests Chinese college students' comprehensive English language abilities.
	Academic	Foreign Language Studying (e.g., Korean Language Studying)	The university provides students with in-session foreign language courses. Undergraduates can take these courses out of their own interest or as preparation for their postgraduate application. The application for Chinese postgraduate language programmes requires candidates to take a foreign language in addition to English.
	Physical	Sports Games (e.g., Badminton Competition, Table Tennis Contests)	The university organizes several sports, including games and inter-university contests.
	Academic, Social	Academics unit, Student Union	Academics unit is one unit of the student union. It is in charge of any academic issues relevant to students.
Departmental	Academic	Text Reciting Activity	Undergraduates are required to recite English texts as one part of their English language studying assessment.
	Academic	Morning Reading Activity	Students in the Department of Educational Technology are required to gather together in a classroom to read English texts aloud each weekday from 0720 to 0800. Attendance is recorded and counts toward assessments of English language studying.
	Academic	Flash Animation	Flash Animation is a specialized course offered by the Department of Educational Technology. Students must complete a piece of work using animation techniques. This forms one aspect of summative assessment.

	Academic	Research Projects	Each academic department at Tianjin Foreign Studies University is required to set and obtain a certain quality and quantity of academic research projects to develop students' academic research ability. In the Department of Educational Technology, students are informed that they will conduct research projects, and are required to apply for one research project at a national standard and two or three at a city or province standard.
	Social	Hometown Presentations	Undergraduates in this university come from different places in China. Hometown Presentation provides a competitive way for groups of undergraduates from the same hometown to share their hometown culture with other students. Groups first present using PowerPoint. If their presentation is appreciated in the preliminaries, groups continue to the finals and get to use dance, singing or drama.
	Social	Newspaper Design Contest	The university newspaper is called Mental Health, and students who participate in designing the newspaper are in charge of content and page printing and distribution.
	Social	Student Elections	Each academic year, there are elections for members to the class committee. Class committee members are responsible for providing help in students' daily life and academic studying.
Qualification-focused	Academic	College English Test (CET) band 4 and band 6	CET is a national and standardized English language ability test. It consists of two test levels, bands 4 and 6, which target different levels of English language learners. It is administrated by the Chinese Education Ministry. Candidates who pass the test obtain a certificate.
	Academic	Postgraduate Learning Application	Chinese university graduates can apply for postgraduate programmes. This application requires candidates to pass entrance exams.

	Academic, Social	National Civil Servant Exams (NCEX)	NCEX is the annual test used to recruit national civil servants to work for the Chinese government.
	Academic	National Accreditation Examinations for Translators and Interpreters (NAETI)	NAETI is administered by the Education Ministry of China and by Beijing Foreign Studies University. NAETI is a national qualification test. NAETI tests candidates' abilities of written translation and interpretation. Obtaining the first level of interpretation, for example, qualifies candidates to work as simultaneous interpreters at big conferences and events.
Self-organized	Academic, Social	English Corner	“English Corner” is an activity organized by one student. It provides other students with the opportunity to communicate in English and practice their spoken English. The student in charge organizes a venue and time for others to gather together and converse in English.

Appendix B: Regulation Items, which belong to Each Activity

Reasons Categories	Numbers of Activities involved	Reasons	Students numbers			
			In all	Year 1	Year 2	Year 4
External Regulation	3	To earn credits in Comprehensive Assessment for scholarship (social) (competence)	3	1: F6, Career Development Association, Student Union Activity	1: S4, other activities in Student Union	1: Fo1, Communist Party Activity, university-held activities
External Regulation	7	Because it has been required (academic, social)	7	3: F9, academic task, English language related courses, Academic Activities; F1, academic tasks; F8, Career Development Association, Student Union Activity; some department held activity	1: S1, communist party discussion, university-held activities;	3: Fo2, doing assignments and homework (academic tasks), Academic activities; Fo5, Texts Reciting (academic tasks), Academic Activities; Fo3, Class election, Department- held activities; Essay writing competition, academic activities; Fo2, some courses, Academic Activities
External Regulation	3	Because the performance accounts for one part of formative assessment (academic)	4	2: F9, academic task, English language related courses, Academic Activities; F1,	0	2: Fo2, doing assignments and homework (academic tasks), Academic activities; Fo5,

				academic tasks		Texts Reciting (academic tasks), Academic Activities;
External Regulation	4	To keep the attendance record (social, academic)	6	1: F2, general selective course, academic activities	1: S8, Morning Reading Activity (academic tasks), academic activities;	4: Fo1, Communist Party Activity, university-held activities; Fo2, some courses, Academic Activities; Fo4, Morning Reading Activity (academic tasks), academic activity ; Fo7, some courses
External Regulation	2	To pass the exams for earning academic credits (academic) (competence)	5	3: F10, computer related courses, Academic Activities; F9, Computer Knowledge Foundation course, Academic Activities; F11, General Selective Course, Academic Activities	0	2: Fo8, computer related courses, Academic Activities; Fo4 General Selective Course, Academic Activities
External Regulation	1	To get the certificates of CET band 4 and CET band 6 which are one of the compulsory requirements (academic) (competence)	2	2: F9, F11, CET band 4 and CET band 6 Training Lectures (Various qualification tests), Academic Activities	0	0
External Regulation	1	money rewarded (social)	2	2: F7, F9, Scholarship Competition, Department-	0	0

				held activities		
Introjected Regulation	1	Because I do not want to ruin my teachers' expectations (academic)	1	0	0	1: Fo7 Writing up dissertation (academic tasks), Academic activities
Introjected Regulation	2	Because staying in dorm is boring / I have nothing to do if I do not take part in activities (academic, social)	2	1: F8 specialized course, "Beyond Training" (computer or English language learning), academic activities	1: S4 other activities in Student Union	0
Introjected Regulation	1	Because I do not want to be isolated from other classmates if most of them take part in the activity (desire of relatedness, social)	1	1: F8, Career Development Association, Student Union Activity	0	0
Introjected Regulation	2	Because it makes me to feel being belonged to the group (relatedness) (social, physical)	2	0	0	2: Fo8, Honest and Credit Club and Loving Care Club, Student Union Activity; 1: Fo2, Badminton matches sports activities, University-held activities
Introjected Regulation	2	I do it because I think I am able to do it (competence) (social)	2	0	2: S4, Hometown Presentation, Department-held activities, other	0

					activities in Student Union; S5, Youth Volunteer Association, Student Union Activities	
Introjected Regulation	1	Because I am good at doing volition related activities (competence) (physical)	1	0	1: S2, Sports games, University-held Activities	0
Introjected Regulation	6	I would feel pretty good / satisfied with the results (competence) (academic)	5	1: F6, English related courses, Academic Activities	1: S5, Computer science related courses or English related courses, Academic Activities	3: Fo4, CET band 4 and CET band 6 Training Lectures (Various Qualification Tests), Academic Activities, Preparing for postgraduate learning enrolment tests (Various Qualification Tests), Academic Activities; Fo8, National Accreditation Examinations for Translators and Interpreters (Various Qualification Tests), Academic Activities; Fo8, Flash Animation (academic

						tasks), Academic Activities; Fo6, computer related course
Introjected Regulation	1	Because I would feel guilty if I do not attend (academic)	1	0	0	1: Fo2, some courses, Academic Activities
Introjected Regulation	1	I take part in when I am in a good mood (academic)	1	1: F8, Computer Science and English language learning related courses, Academic Activities	0	0
Introjected Regulation	1	Because it is my duty, responsibility (social)	1	0	1: S4: working in Academics unit, student Union activities	0
Introjected Regulation	1	I have spare time to participate in university activities (autonomy) (social)	1	0	1: S7, other various activities, Student Union Activity	0
IdentifiedRe gulation	1	Because I think highly of building up interpersonal relationship do not care academic studies very much (relatedness) (social)	1	0	0	1: Fo7, Building up interpersonal relationships
Identified Regulation	1	Because it is a new form of learning and want to have a try (autonomy) (academic)	1	1: Team work for Studying (academic tasks) F5, Academic Activities		

Identified Regulation	1	The activities are organized by students and so the atmosphere for taking part in activities is quite good and different from high schools (social)	1			1: Fo6, other various activities, Student Union Activity
Identified Regulation	1	There were no activities in my high school so I want to have a try at university (autonomy) (social)	2	0	2: S7, S1, other various activities, Student Union Activity	0
Identified Regulation	1	Because I do not want to let it pile up until right before the exams or it will stress me out too much (academic)	2	1: F3 specialized course (English related courses)	1: S1	0
Identified Regulation	1	Because I do not want to fail in exams (competence) (academic)	2	2: F3, specialized course (English related courses); F7 specialized course (English related courses)	0	0
Identified Regulation	1	Because I can show how I am capable of doing it / I want to compete with other students (competence) (academic)	1	0	0	1: Fo6, computer related course
Identified regulation	1	To prove that I worked hard during the university times (competence) (academic, social)	2	2: F9, Various Qualification tests; F6, Scholarship Competition, Department-held activities	0	0

Identified Regulation	1	Because I want to do the living as most graduates in the department by find a job depending on my computer and English skills (competence) (academic)	1	1: F7, Computer science related courses or English related courses, Academic Activities	0	0
Identified Regulation	1	Because I want to be accepted by others for doing a good job (competence, relatedness) (social)	1	0	1: S7, other activities in Student Union	0
Identified Regulation	1	I want to learn new things, which are different things from academic studying (social) (competence)	1	1: F10, other activities in Student Union	0	0
Identified Regulation	8	Because it is good for personal development (competence) (social, academic)	8	3: F1, F6: Career Development Association, Student Union Activity; F4, Hometown Presentation, Department- held Activities;	3: S7, S6, other various activities, Student Union Activity; S5, Research Project, academic activities; S6, English Speech Contest, National English Contest for College Students, academic activities;	2: Fo3, Arts Festival, school clubs (Drama club activities) singing contest, Fresher's welcoming Party, Student Union Activity; Table tennis contest, Sports activities, University-held activities. Fo9, English Speech Contest, academic activities

					S6, S5, Lectures or Seminars, University-held Activity	
Identified Regulation	4	To meet and to know different people (relatedness)(social, physical)	5	3: F6, Career Development Association, Student Union Activity; F3, Newspaper Design Competition, Department- held activities; F7some activities	1: S7, other various activities, Student Union Activity;	1: Fo4, sports activity
Identified Regulation	1	Because it helps to get along with friends as working / taking part in activities together (relatedness) (social)	3	2: F6, Career Development Association, Student Union Activity; F5: organizing activities	1: S5 research project	0
Identified Regulation	4	Because it helps to gain more experience (competence) (social, academic)	5	2: F6, Career Development Association, Student Union Activity; F9, Helping Blind People in society Activity, Student Union Activity	1: S4, other various activities, Student Union Activity	1: Fo6, other various activities, Student Union Activity; 1: Fo3, Essay writing competition, academic activities
Identified Regulation	1	Because it helps me to make other people happy (relatedness) (social)	1	0	1: S5, Youth Volunteer Association, Student	0

					Union Activity	
Identified Regulation	2	Because I can learn by taking part in the activities (competence) (social, academic)	2	2: F4, Hometown Presentation, Department-held Activities, 1: F9, CET band 4 and CET band 6 Training Lectures(Various Qualification Test) Academic Activities	0	0
Identified Regulation	4	Because it can help me to make a decision of my future development in future career/ helps me to find a job in the future (competence) (social, academic)	9	2: F7, F6, Computer knowledge and English Language Learning, Academic Activities	3: S8 Civil Servant Exams (Various Qualification Test), postgraduate learning application (Various Qualification Tests)or English language learning; S3, S1, Computer knowledge and English Language Learning, Academic Activities	4: Fo1, Fo5, Lectures or Seminars, University-held Activity; 1: Fo6, Computer knowledge and English Language Learning, Academic Activities; 1: Fo8, National Accreditation Examinations for Translators and Interpreters (Various Qualification Test), academic activities
Identified	1	Because it is good for health (physical)	1	0	1: S2, Sports	0

Regulation					activities, University-held Activity	
Identified Regulation	1	Because it helps me keep track of my progress (competence) (academic)	2	0	0	2: Fo2, Various Qualification tests, Academic Activities; Fo4, doing assignments and homework (Academic tasks), Academic Activities
Identified Regulation	2	Because it helps to think from other group members' perspectives (competence) (academic, social)	2	1: F10, Group Discussion (Academic tasks), Academic Activities;	0	1: Fo7, Building up interpersonal relationships
Identified Regulation	2	Because it helps to prepare for further learning (can be as one of the tests for postgraduate programme) (competence) (social, academic)	3	2: F6, Scholarship Competition, Department-held activities; F4, doing assignment in mathematics (academic tasks), academic activities	0	1: Korean Language learning (foreign language learning), Fo4, Academic Activities;
Identified Regulation	5	Because it is useful (competence) (social, academic)	5	1: F7, for CV Scholarship Competition, Department-held activities	2: S3 English Corner, Other activities, S1: academic studying	2: Fo5, Texts Reciting (academic tasks), Academic Activities; Fo8 National English Contest for College Students, lectures or seminars,

						academic activities
Identified Regulation	1	Because it helps me to foster interests in a specific field (competence) (academic)	1	0	0	1: Fo3, Essay writing competition, academic activities
Identified Regulation	1	Because it helps me to develop my knowledge of specialized subjects (competence) (academic)	1	1: F2, CET 6 exam papers practicing, foreign language studying French	0	1: Fo8, Lectures, Academic Activity
Intrinsic regulation	16	Because I am interested in (social, academic, physical)	18	7: F2 acting and performing, Student Union Activities; Some activities related to Science, Academic Activities; Interesting Sports Games, department-held activities; F6, Water Anti- wasting Activity (other activities), Student Union Activities; F5, F11, Sports Games, F6, Communist Party Discussion, University-held Activities; F5, Chinese Rhetoric Lecture, General Selective courses; F11, Computer knowledge and	6: S8, Evening Party, Student Union Activities; S2, Sports activities, University-held Activities; S3, S1, Computer knowledge and English Language Learning, English language learning, Academic Activities; English Corner, S3; S7, S5, S8, English Speech Contest;	5: Fo1, Evening Party, Student Union Activities; Fo3, Fo4, Sports activities, University-held Activities; Fo6, Computer knowledge and English Language Learning, computer science , Academic Activities; Fo6, Some courses, Academic Activity; Korean Language learning, Fo4, Academic Activity; Fo8, National Accreditation Examinations for Translators and Interpreters, memorizing related knowledge Academic

				English Language Learning, computer science , Academic Activities; F9, computer science, Academic Activity; F10, Group Discussion, Academic Activity; F11, Japanese Language learning (Foreign language learning) Academic Activity; F3, Newspaper Design Competition, Department-held activities		Activity; Fo1, Fo3, English Speech Contest; Fo8, National English Contest for College Students, Academic Activity
Intrinsic	2	Because it is entertaining (social, physical)	3	1: F7, department held activity	0	2: Fo4, Fo9, Sports activities, University-held Activities

Appendix C: Invariant Meaning Units of the Experience

Undergraduates' Expressions of their Integrated Goals and the Implied Basic Psychological Need for Competence

1. "I want to work for big company after graduation";
2. "I want to work to organize events and cooperate with others, so I want to study well academically and develop my working abilities through participation in social activities at university";
3. "I want to find a job like those sought by most other graduates, which does not require either too much physical labour or too much thinking";
4. "I think I can apply computer science knowledge in my future job, therefore I am interested in computer science studying";
5. "I took part in studying related activities because I think I can develop my future career in this field so I want to learn more about it";
6. "I may develop my future career in business so I read books on these topics at home and also look for relevant things to read in the library";
7. "I want to work in the field of English language. That means I have to learn English well and I have to make a big effort to learn language well";
8. "I want to develop my future career in the field of education or educational psychology rather than computer science, therefore I pay more attention to studying educational theory";
9. "I want to find a job in the field of English language education

therefore I do not want to only pass the related courses exams but I want to study well and study more”;

How Students Express their Integrated Goals: Competence and Relatedness

1. “I want to obtain additional qualifications as a hard-working person, in order to become competent in Chinese society”;
2. “I want to be independent, a person with good communication abilities and skills that employers will value when I graduate from university, therefore I try to develop my interpersonal skills and different competencies and try to experience more”;
3. “I have to learn how to get along with someone who I do not like at the university”;
4. “I am interested in talking to students, in order to build up my interpersonal relationships”;
5. “I want to be accepted by others therefore I try to get along with others”;
6. “I want to be accepted by others by doing a good job, so I insisted on being involved in activities that would provide opportunities to do so”;

How Students Express their Integrated Goals: Varied

1. “I want to work directly after graduation rather than apply for postgraduate programmes”;

2. “I want to develop study skills and academic performance in different ways”;
3. “I want to enhance their personal development or the variety in their life”;
4. “I want to experience and know more”;
5. “I now pay attention to this kind of development (finding a job after graduation) and I am motivated to participate in these careers-related activities”;
6. “I am not enthusiastic about studying when I was in their first two years but become self-determined to do better when I am in the fourth year, in order to find a job”;
7. “I took part in an English language speech contest, in order to develop my English speaking ability”;
8. “I would love to go to the library and read magazines there in my spare time. I feel it would be good to read something about English language studying. It is good for studying”;
9. “I study for myself in order to obtain good academic achievement even though I am also required to do so (exam requirements); I understand which parts I am weaker at by taking exams”;
10. “I want to go abroad for further study so a good GPA is important, and I want to study well”;
11. “I register for in-session Korean Language courses, which is beneficial for applying postgraduate programme”;
12. “I want to enhance my personal growth through pressure or stress” when

“compared to previous high school classmates who attended better universities in bigger cities (for example, Beijing)”;

13. “I like studying philosophy and I think it has important lessons, based on history because it (philosophy) tells me the significance of living and life, in order to develop various aspects of myself”;

14. “I want a life of variety, I want to be successful academically and in other aspects so I try to study well and take part in various activities”;

15. “I want to participate in activities, which are organized and launched by foreign language experts, because I want to learn more, understand more and experience more”;

16. “I would love to participate in English essay writing, in order to nurture interests in this field and nurturing interests in such field is a process of self-development”;

17. “I am confident in my academic ability, but not in my working abilities, and I am motivated to learn more and to become ‘more extroverted’”;

Internal Factors Facilitating Undergraduates’ Abilities to Act Self-Determinedly

1. “In terms of studying computer science, I think what I can learn from my class is not enough so I learn outside of the classroom, by myself”;

2. “I decided to learn by myself when I found that the teachers’ methods of

teaching were unrewarding and uninspiring”;

3. “I think the teacher teaches too slow, so I decided to study by myself and I think it is much more efficient”;
4. “I do not think that gathering together with other classmates to do their English reading works well, and I decide to start their morning English reading one hour before the official Morning Reading activity started at 07:20 each weekday, so that they could become more efficient at reading English”;
5. “I think I am the kind of person who can decide what I want. I rarely hesitate in making a decision. I always know what I want”;
6. “I can manage to find the time to do what I want to do, such as study economic and business related knowledge”;

Internal Factors Impeding Undergraduates’ Abilities to Act Self-Determinedly

Individual Personality

“ I am shy and nervous to perform on the stage so I do not dare participate in arts and performance activities even though I understands that such participation would potentially benefit me through developing my personal capabilities”;

Lack of Self-Confidence

1. “I do not want to take part in some activities, and maybe it is kind of escape from what I am not good at, even though I know that I lack

those abilities and that I need to develop myself by taking part in those activities. I do not have the confidence to participate”;

2. “In my dorm, some of my classmates are good at one thing and others are good at another...I am good at studying and I am better in studying than them and I am confident in this... I study well”;
3. “I do not think that I possess the ability to think logically that would enable him to perform to a high standard on a specific course, I would rather quit and channel my efforts into another course which I am good at, in order to attain better performance”;

Unsuccessful Time Management

1. “I cannot do everything perfectly, given that time is limited; classes occupy too much time so I haven’t been able to study each course as well as I would like”;
2. “I feel I cannot manage my studying time very well so it (academic studying of each course) was a little bit low in efficiency”;
3. “I cannot do everything perfectly and my energy is limited when I am doing the double bachelors”;

Valuing, yet Limited Availability, of Leadership Roles

1. “I am not in a position of responsibility in this activity”;

2. “Many activities, I only help to organize the activity but I cannot learn from it. I am not running the activity or doing the main organizing role”;
3. “I do not want to do this sort of thing (i.e., I am always allocated to do something such like prepare rooms for meetings and it does not require skills) and I am not interested in it but I have to as it is my duty and responsibility as part of the unit. It cannot show what I am capable of and it does not develop my personal abilities”;
4. “I was promoted to vice president of the Student Union, so I am sure I will love taking part in Student Union activities”;

Internal Factors Preventing Development of Integrated Goals

1. “I do not understand what I could do to enhance my own personal development or growth because of ‘Ding Xing Si Wei’”;
2. “I am not a very enthusiastic person. I do not have particular requirements of myself. I am fine if I am happy... Whether I like doing something depends on my mood.”

How Basic Psychological Needs for Competence and Relatedness Facilitate Chinese Undergraduates’ Self-Determined and Extrinsic Motivation to Participate in University Activities and Academic Courses by Mediating the Impact of Factors in the University Environment on this Motivation

Environmental Factors Interpreted as Autonomy-Supportive Informational Events

1. "I choose to participate in the activity, because this activity provide opportunities with me to meet and get to know other people";
2. "I choose to participate in the activity, because this activity can help me to develop my interpersonal communication skills";
3. "I make friends and widen personal views by taking part in sports activity with others";
4. "The knowledge taught in the course is useful for future career development";
5. "It helps me develop learning ability and interpersonal skills through working together";
6. "There are some English language contests and competitions in the university, which are beneficial for accumulating academic competence";
7. "There is an in-session Korean language course...it will help me get onto a postgraduate programme."
8. "The teacher provides suggestions for improving our ability to recite English texts" ;
9. "University library stock is sufficient for finding sought after information and resources that are necessary for good language studying";
10. "The access to information about career decisions and job hunting by lectures and seminars is good";
11. "There are some lectures and seminars organized by the university that

helped make decisions about future jobs”

Environmental Factors that Foster Integrated Goal Setting

1. “The teacher requires us to recite English texts, and I think it is useful to me. It is how you learn a language and recitation is useful in showing us how the language is usually expressed”;
2. “Teachers’ encouragement by telling us the significance of studying to our future career means that we want to study as we agree.”
3. “I realized that there is a lot of pressure to find a job in the future by participating in the activities in Career Development Association so I have to study well and realize that it is the most important thing”;

Environmental Factors Interpreted as Non-Autonomy-Supportive

1. “I cannot work on my academic research projects in the lab as late as I need to because the dormitory gate gets closed early”;
2. “There is not enough time to sit in other language courses in the language department, because time is mostly occupied by courses in the Department of Educational Technology”;
3. “seminars on finding jobs are presented by university administrative staff rather than people who actually do that job and who have practical experience of finding a job in that field”;
4. “The teachers in the university environment who provide seminars on job hunting

cannot give students practical guidelines”;

5. “Access to practical information about the outside world (i.e., Chinese society) is not so good and there’s not enough of it. I cannot obtain this access, I do not know who I can ask about it, and I am not quite sure how to go about finding it if I can’t find someone to ask”;
6. “The opportunities provided by this university to know or understand Chinese society are rare, and there is not enough time outside of classes to find these opportunities (for example, internship opportunities) by myself.”
7. “I had no opportunities to sitting in more advanced language classes in the foreign language departments of the university”;
8. “Opportunities to participate in big events are rare when most of the seats are allocated to big departments such as the School of English Studies.”
9. “The university organizes some conferences which are not related to my life and which I do not intend to participate in”;
10. “I think university activities do not provide a depth of experience and are superficial. I don’t think I can make real friends by taking part in this activity even though I think highly of developing interpersonal relationships”;
11. “I cannot always learn from taking part in activities”
12. “The teachers only taught us the grammar and vocabulary but we need to know how to apply this practically”;
13. “Some of the courses are taught by postgraduate students. I do not think they are professional or skilful enough and I do not think they can inspire us about life

either”;

14. “I studied Probability in the independent study classroom. Other students around me felt it was weird that I studied mathematics. It made me feel uncomfortable, so I lost my interest in the course and only did the homework that was required”;
15. “The hardware (i.e., library stock and database) is not so good in the university environment in terms of academic studying.”
16. “It is not convenient to try and surf the internet while I am in the university environment. There are only a few computers in the library connected to the Internet and there is always a long queue. The teaching building has the same issues with Internet access. Also, the equipment in the video room is out of date”;
17. “The general selective courses (electives), such as history and politics, test students by requiring them to recite knowledge which makes the students feel that it lacks significance... I do not think it is worthwhile and I forgot what I had learnt about the history of computer development after I took the exam. I hate doing something that I know lacks meaning”;

Environmental Factors that Hinder Integrated Goal Setting

1. “Teachers require us to complete tasks in similar ways and always with similar requirements, and it is hard to concentrate on the course”;
2. “The content of the courses is unattractive, and I feel it is difficult to learn and master”
3. “I have no opportunity to see how the knowledge I have learnt is applied in

practice”

Switching from Integrated Goal Pursuit to Non-Self-Determined Motivation for Behaviour

1. “In the beginning, I felt like I would love to take part in the teamwork, which makes students try to work cooperatively in order to finish tasks. But later I felt that my team mates did not want to get involved. I finished the work as I would any other task”;
2. “The knowledge of the course ‘Computer Knowledge Foundation’ tested in the exams may be useful but I do not like the way of learning it... by reciting... I do not think recitation is worthwhile but I have to do to pass the exam”;
3. “I signed up for the Career Development Association which is supposed to give us chances for example to interact with outside organizations but this did not happen in reality...However, participating in these activities helps me to get credits for obtaining a scholarship”;
4. “The point of morning reading activity is to practice our oral ability in the English language but I am not impressed with what I have read because I can’t remember what I have read or understand it properly...But because attendance at the Morning Reading activity is included in our student attendance record and attendance is a part of summative assessment, I have to go”.

Consequences of Self-Determined and Extrinsic Motivation or Lack Thereof

1. "I feel good";
2. "I know where I am (what my level of academic English language is) by taking the CET 6 several times."
3. "I improved how I mentally deal with challenges and failure by competing with others as part of a table tennis activity."
4. "I gained a lot by taking part in activities, in terms of preparation for my future."
5. "I valued myself more by taking part in activities in the Student Union"
6. "I do not feel like I'm doing very well,"
7. "The class is torture, and I am easily distracted."
8. "I am disappointed and revolted."
9. "I don't feel like I'm gaining anything from what I am learning at the university."
10. "I feel out of touch with society and do not have opportunities to apply what I have learnt"
11. "I do not think I am competent enough...I am not sure whether what I have learnt at university can be applied in society."
12. "I feel it is something of a pity. I studied hard and I am at the top of the list in terms of my academic performance on exams but I still lack the experience of taking part in large activities or events."
13. "I feel pressured or stressed that there is fierce or unfair competition in hunting for jobs in Chinese society";

14. "I do what I should do or are supposed to do";
15. "I have got used to accepting what is required by teachers."
16. "I try to maintain a good psychological state."
17. "I realized that the knowledge I have learnt at university is different from the knowledge and skills required in society. It is not realistic to require the university to be like a society. I think the university should do what it is supposed to do. That is, the aspect of student academic development."
18. "The university is not supposed to be like this. I hoped I would be inspired for my future life while being here but I have not got this kind of inspiration."
19. "A difference exists between the university environment and Chinese society."
20. "In general, I think I am more grown up and mature because of the four years I have spent at university...I think I am competent in finding a job or applying for a postgraduate programme."
21. "I have gained more confidence...I am now confident in my abilities."
22. "I feel I have really developed my personality in my four years at this university."
23. "I am more mature in terms of my perspectives about things around me and I think university gave me the opportunities to mature in this way."
24. "In terms of specialized academic study, I made some progress... When I was working, I communicated with students as well and they provided me with lots of help. I accomplished what I thought I could not."

Undergraduates' Implied Expectations of the University Environment in Facilitating their Self-determined and Extrinsic Motivations to Participate in

University Activities and Academic Courses

1. "I expect more independent study rooms and more seats in the library, more access to the Internet, updated video room facilities and a better research database."
2. "I think as we are already in university teachers should not interfere in such things. Different people have different ways of living."
3. "I think the school should let undergraduates have the right to choose whether they need to go to the class or not."
4. "I expect opportunities to communicate with English native speakers because I think that will be good for my specialized study of the English language."
5. "I expect opportunities to learn in larger groups both in my core and elective classes in order to be able to communicate with other students more."
6. "I expect a good atmosphere, which will motivate students to study."
7. "I think the university environment should put more efforts on academic studying and research development."
8. "I expect the academic activities can be rewarding, to be developed "in quality and content", and to "be tailored to undergraduates' needs for personal development."
9. "I think the university should provide us with internship opportunities. I do not want to search for these opportunities by myself so I think the university should provide some for us".

10. “I expect the university to launch more special interest groups that can improve our abilities in preparation for careers and that are connected with meeting the needs of working in Chinese society”.
11. “I expect the university to provide fairer opportunities for students like me. I’m not saying that I do not fight for a chance to participate but the opportunities provided by the university are for those people who are more capable comparatively”.
12. “I expect this university can provide opportunities which can cultivate students’ taste and enhance undergraduates’ inner value, such as arts performance”.
13. “I think the teacher should have knowledge of literature, history and philosophy. If someone possesses these three aspects of knowledge, he/she is qualified no matter what course he/she is teaching, especially in the humanities”.

Appendix D: Three examples of Coding (English Version and Chinese Transcription of Each Example)

Example 1:

Student F1, Female

Interview date: 20/05/09

Interview Venue: Garden behind the Dormitory

Data Extract	Coded for	Sub-theme	Theme
From the beginning, I thought that there would be some potential benefits in terms of possibilities for self-development if I took part in the Career Development Association, and I thought it would be good for my self-development and I was very pleased to have a try.	There would be some potential benefits in terms of possibilities for self-development.	identified regulation	internalization
I am not interested in the tasks because I do not want to do it in the same forms by the similar requirements. If I am required to do it many times in the same way I can not insist. I think the teachers should change the requirements of the tasks or the forms of accomplishing the tasks. Now, I cannot be motivated by the teachers and I think some of the classes are really boring. It is difficult for me to concentrate on the class.	1: I am not motivated to concentrate on the task, which is required in the same form and the similar requirements by teachers; 2: I feel boring when I cannot be motivated to study	1. the teacher hinders undergraduates to value integrated goals by requiring accomplishing tasks in the same form; 2. negative consequences when undergraduates cannot value integrated goals	1. environmental factors cannot support BPN 2. consequences of undergraduates' internalization
I think teachers usually give us	1: I think teachers usually give	1: teachers'	1: environmental

opportunities to study by ourselves and we have got used to their ways of teaching gradually. But they do not think about whether each student can get used to it easily or whether it's difficult, and it is impossible for teachers to consider every students' feelings.	us opportunities to study by ourselves 2: they (teachers) do not think about whether each student can get used to it easily or whether it's difficult, and it is impossible for teachers to consider every students' feelings.	course delivery: give opportunities for self-determined and extrinsic self-regulation; 2: teachers' course delivery: does not give such opportunities	factors supporting self-determined and extrinsic motivation 2: environmental factors hindering self-determined and extrinsic motivation
I do not think I am on the very good state and I cannot be fully motivated to study, not only for the textbooks study but also for every aspect of study. I think that the university is not the university as I thought and expected as before.	I am not on the very good state and I cannot be fully motivated to study.	negative consequences of not accomplishing integrated goals	consequences
The university, which meets my expectation is...because we take specialized subjects in small group classes usually, and we only have lessons in a large group with other students from different departments when we take general selective subjects (Specialized subjects count for more than the general elective subjects). I feel like I am still in middle school as teachers supervise us a lot. For example, Teachers still supervise our Morning Reading activities. I think as we are already in university teachers should not interfere in	1: I feel like I am still in middle school as teachers supervise us a lot; 2: I think we have already been enrolled in the university and teachers should not interfere in such thing;	1: negative consequences of not accomplishing integrated goals: low efficiency in studying 2: teachers' supervision hindering the accomplishment of integrated goals 3: expectations of the university	1: consequences 2: environmental factors hindering self-determined and extrinsic motivation 3: expectations of the university

such things. Different people have different ways of living. A group of people sitting together reading aloud in a classroom is really noisy and it is hard for me to concentrate on reading the English texts. It seems like all the students are reading but it is really ineffective.			
I do not feel like I am able to do what I really want to do. Especially because I am always occupied with lessons I am not interested in. There are not that many opportunities for me to do I want to do. There are so many lessons per day and I have no time.	I am always occupied with lessons I am not interested in I do not feel like I am able to do what I really want to do.	no enough time to accomplish integrated goals	environmental factors hindering self-determined and extrinsic motivation
I do not think performance at school should be assessed by class attendance. For example, I should be able to choose and attend the lessons I am really interested in. If I am not interested in the classes I can choose not to go and I can use the time to do something which I think is meaningful.	I do not think performance at school should be assessed by class attendance.	expectation of the university to give undergraduates the choice to do meaningful things: course setting	expectations of the university
I feel I cannot manage my studying time very well so it (academic studying of each course) was a little bit low in efficiency.	1: A little bit low in efficiency; 2: I cannot manage time to study well	1: negative consequence; 2: time managing ability	1: consequence 2: internal factors hindering self-determined and extrinsic motivation

Example 1 Chinese Transcription

F1 学生

性别：女

年级：大一

访问时间：2009 年 5 月 20 日

访问地点：宿舍楼后小花园

问：你对学校哪些活动特别感兴趣？乐于参与的？

答：刚开始对职协感觉挺有潜力的，感觉这类似的对自己挺有好处的，就乐意去尝试。

问：老师在教学上布置的一些任务，有没有自己乐意去做的？

答：老师布置的任务感觉就是作业，没有充分调动自己的积极性。

问：你觉得这些东西是不好玩还是没用？

答没有兴趣，做多了就感觉没意思，不能坚持。应该经常变换一些形式。

问：哪些东西是不喜欢不乐意做的？

答：有些课老师不能调动自己积极性的，就会感觉特别讨厌，不愿意上，听不进课。

问：你觉得老师会理解你们这种感受吗？

答：老师试着放手让自己去学，他的教学方式也基本让大家习惯了，适应了。但是不会考虑大家是不是都适应，不可能每个老师顾及到每一个人。

问：那你们有没有去跟他沟通？

答：没有

问：为什么？

答：不喜欢，也没有想去说的感觉。

问：在现在学校的环境里，你自己看待你自己？怎么给自己定位的？

答：感觉自己状态不好，没有充分调动自己学习的积极性。不只是课本，还有学习各方面的东西。感觉这个学校不是我想象中大学的感觉。

问：你想象中大学的感觉是什么？

答：现在最多就是上公共课是坐在教室，其他都是小班上，就高中的感觉，老师还盯早自习，我感觉大学了，老师不应该做这种干涉，不同的人生活方式是不一样的，一群人坐在教室里很闹，有时是看不进去书的，虽然整体是坐在那里了，但是没有学习的效果。

问：你认为做自己愿意做的事，对你来说重要吗？

答：重要，但是现在这方面权利不够。在时间上受限制，不喜欢上的课也得去上。做自己喜欢的事的机会不多。每天课太多，没有时间。

问：你认为学校应该给你个什么样的环境你才满意？

答：我感觉平时的表现不应该在考勤上体现，比如不喜欢听的课可以不去，可以去干自己认为有意义的事。

Q 学习方法上有没有什么不适应的（适应这个学校的过程中）？

A 感觉自己不太会安排自己的学习时间，在学习上效率很低。

Example 2:

S5, Female

Interview date: 19/05/09

Interview Venue: Garden behind the student dormitory

Data Extract	Coded for	Sub-theme	Theme
I feel that many students are enthusiastic about volunteer activities held by the school and department and the school clubs. I am enthusiastic about them, too. Another thing I am interested in is Research Projects. Though I am not capable of doing it I would love to participate in it at least to work with others. I think doing the research project could help me develop my research abilities and also my independent study abilities. Students care about these kinds of things; we think taking part in these activities can help us develop our abilities. We are also interested in seminars held by the school. In general, I am interested in and I would love to participate in those activities which develop my learning abilities and interpersonal skills.	1: Students care about these kinds of things; we think taking part in these activities can help us develop our abilities (develop my learning abilities and interpersonal skills). 2: I think doing the research project could help me develop my research abilities and also my independent study abilities.	identified regulation	internalization
In fact I think the potential of the school is limited and the	1: I mean sometimes students can not always	1: activity setting hindering	1: environmental

<p>effect of the activities is not always good, I mean sometimes students can not always learn from taking part in activities. But sometimes, they have practical effects. For example, when I was in first year, I took part in the Youth Volunteer Association organized by the school and got involved in the activities. We went to a primary school which was associated with Tianjin volunteer groups. The size of the organization is comparatively big and the practical effect is good. I felt good and I found I learned a lot. The classmates in my dormitory prepared a performance for the kids and teachers in the primary school. The students in that primary school come from poor families. We played games with them then and donated books to them. I felt they all loved being involved and that they also liked to communicate with us. Though we were tired we all felt happy and satisfied.</p>	<p>learn from taking part in activities; 2: The size of the organization is comparatively big and the practical effect is good. 3: I felt good and I found I learned a lot. 4: I felt they all loved being involved and that they also liked to communicate with us; Though we were tired we all felt happy and satisfied.</p>	<p>self-determined and extrinsic motivation; 2: activity setting facilitating self-determined and extrinsic motivation 3: positive consequences</p>	<p>factors hindering self-determined and extrinsic motivation; 2: environmental factors facilitating self-determined and extrinsic motivation; 3: consequences</p>
<p>I am not that interested in studying but I have to. There are some courses that I am not really interested in. I am not sure what they are for and I have no idea whether I will</p>	<p>I am not sure what they are for and I have no idea whether I will be able to use the kind of knowledge taught in them in the future or</p>	<p>academic course setting hindering self-determined and extrinsic motivation</p>	<p>environmental factors hindering self-determined and extrinsic motivation</p>

be able to use the kind of knowledge taught in them in the future or how I could use it. Moreover, it is hard for me to relate it to other courses, and it seems it will never be applied in real life situations and most of us students do not want to attend.	how I use it.		
For example, from my perspective, I am not interested in computer science-related courses so I really do not want to learn about programming. Programming requires people to think actively and logically. I think I really lack those thinking abilities and even if I make an effort in programming, I will not gain good results. It wastes my time as well. So I prefer to allocate time to other aspects of studying which I'm interested in and I can also learn other things, in order to develop other abilities. I think that's much more effective.	I think I really lack those thinking abilities (thinking logically) and even if I make an effort in programming, I will not gain good results.	personal abilities (the ability of thinking logically) hindering self-determined and extrinsic motivation	personal factors hindering self-determined and extrinsic motivation
For my specialized courses I have to take exams, so I have to make an effort in them. This situation exists in fact I have to make effort on it in order to pass it. Actually I would love to study it. I reviewed the course on	For my specialized courses I have to take exams, so I have to make an effort in them. This situation exists in fact I have to make effort on it in order to pass it.	external Regulation	internalization

<p>“Powerpoint” and also did the homework allocated by the teachers. If there is some knowledge I found difficult to acquire, I made an effort to try to understand it. It is difficult to gain a high score and reach the high standard for me, but it is not so difficult to get an average score. I make an effort normally and then it is not so difficult when the exams come.</p>			
<p>Even though my ability to think logically is not so good, as I am not so intelligent, I love studying anyway. The teacher teaches us and I put a certain amount of time into it so I expect a good effect and result. Even though I do not know what this kind of knowledge is for in the future I want to have a try and learn. In case it can be applied in the future there is a kind of psychological consolation.</p>	<p>In case it can be applied in the future there is a kind of psychological consolation.</p>	<p>identified Regulation</p>	<p>internalization</p>
<p>The teacher told us that we need to apply what we learn in our Computer Database course when we do our Graduation Project. She recommended that we keep our course materials such as Powerpoint printouts and handouts. Most of us tried to study them as well as</p>	<p>1: The teacher told us that we need to apply what we learn in our Computer Database course when we do our Graduation Project.; 2: The teacher possesses the ability of thinking logically and she teaches the knowledge</p>	<p>1: teachers’ encouragement facilitating self-determined and extrinsic motivation; 2: teachers’ personal abilities and instructions facilitating self-determined and extrinsic motivation</p>	<p>1: environmental factors facilitating the value of integrated goals; 2: environmental factors</p>

<p>possible. She reminded us to save the materials or handout collected in the courses because it may will be used in the future when we are doing the graduation project. Most of us try to study it well. The teacher possesses the ability of thinking logically and she teaches the knowledge clearly. After each teaching unit, she allocates us some assignments so that we can get to understand the knowledge in depth. This kind of teaching makes the course a bit easier. If the teacher tells us the significance of learning it most of us would love to learn. I know there are some other students, they do not want to learn at all and they just review it just before the exams. They are not interested in it at all. For me, I am not so extreme. I am not interested in it very much but I can make effort on it.</p>	<p>clearly. ... This kind of teaching makes the course a bit easier.</p>		<p>facilitating self-determined and extrinsic motivation</p>
<p>I am the commissary in charge of studies so I communicate with teachers on the aspect of studies more than other students. For example, some students are always absent from the computer database courses. The teacher is strict and she</p>	<p>The teacher said the course is designed for the majority of students but some students are not interested in it and that that is understandable.</p>		

<p>asks me to tell the students who are absent that if they do not come she will do something. When I was talking to the teacher she said she does not understand why these students do not come to the class. I just said that they are maybe not interested in the course. The teacher said this part of knowledge will be applied in the future but she also agrees that if they are really not interested in the course that she cannot force them. If they are forced to come the students will not learn effectively. The teacher said the course is designed for the majority of students but some students are not interested in it and that that is understandable. But there are regulations in terms of class attendance so the teacher felt she had to require the students to come.</p>			
<p>Another example is the Probability course, a General selective course. Only the students in my department take this course. This university is for language learning and has mainly got a humanities studying atmosphere. I remember when I was in first year, I studied Probability in the</p>	<p>I studied Probability in the independent study classroom. Other students around me felt it was weird that I studied mathematics. It made me feel uncomfortable, so I lost my interest in the course and only did the homework that was</p>	<p>studying atmosphere hindering self-determined and extrinsic motivation</p>	<p>environmental factors hindering self-determined and extrinsic motivation</p>

<p>independent study classroom. Other students around me felt it was weird that I studied mathematics. It made me feel uncomfortable, so I lost my interest in the course and only did the homework that was required. The final exam was not so difficult and I can pass it. I do not require too much on the course then. The students in my department all come from a scientific background and we used to put a lot of effort into studying mathematics. Now we do not require us doing well on this aspect (mathematics) in university and the environment here does not give us the chance to study this kind of thing very well.</p>	<p>required.</p>		
<p>There are some activities which are really superficial which I do not want to participate in. Seats for one seminar were allocated to all students no matter which department or class. You have to go if you are allocated a seat. The speaker was invited by the school and came here to give a talk about the Communist Party and politics. Many students were not interested in it. The school was required to have</p>	<p>The school was required to have an audience present, so it did it like this. Students in every class were allocated a seat, and you came and received scores toward your final examinations. But still, few students wanted to come.</p>	<p>1: external regulation; 2: activity setting hindering self-determined and extrinsic motivation</p>	<p>1: internalization; 2: environmental factors hindering self-determined and extrinsic motivation</p>

an audience present, so it did it like this. Students in every class were allocated a seat, and you came and received scores toward your final examinations. But still, few students wanted to come.			
There are not that many students in my department so the teachers like to communicate with us. When we come to them they are all helpful and very kind.			
At university, I have a goal for myself that though I am enrolled in the department of educational technology I still want to learn another foreign language because it is a foreign studies university which has got the kind of environment and atmosphere that is good for foreign language learning and I want to take advantage of it. In the second academic term of my first year, it was difficult for me to study German and Korean at the same time. I was particularly busy that term, and there were classes every night from Monday to Friday. I felt this kind of life was quite intense and that my time was also too occupied. I was too busy to learn and I could not handle it. I do not insist on learning both	1: I have a goal for myself that though I am enrolled in the department of educational technology I still want to learn another foreign language because it is a foreign studies university which has got the kind of environment and atmosphere that is good for foreign language learning and I want to take advantage of it. 2: I felt this kind of life was quite intense and that my time was also too occupied. I was too busy to learn and I could not handle it.	1: university atmosphere facilitating the value of integrated goals; 2: limited time hindering self-determined and extrinsic motivation	1: environmental factors facilitating the value of identifications; 2: environmental factors hindering self-determined and extrinsic motivation

languages, and maybe I can pick them up again in the future.			
<p>I want to be independent, a person with good communication abilities and skills that employers will value when I graduate from university therefore I try to develop my interpersonal skills and different competencies and try to experience more. I am now working for the Communication Sector in my department but in the beginning I found it difficult. Then I took some part-time jobs off campus and I found that I like doing interpersonal things... I like communicating with people. When I was working in mobile phone sales the leader thought I did a good job. I am interested in that kind of thing. During my four years of being at university, I want to cultivate and develop my interpersonal skills and abilities. I would love to get a job in sales or education after graduation.</p>	<p>1: I want to be independent, a person with good communication abilities and skills that employers will value when I graduate from university therefore I try to develop my interpersonal skills and different competencies and try to experience more.</p> <p>2: I want to cultivate and develop my interpersonal skills and abilities. I would love to get a job in sales or education after graduation.</p>	expressions of integrated goals	expressions of integrated goals
I think there are certain restrictions at university. For example, when there is a research project, the teacher appoints a certain student as	When there is a research project, the teacher appoints a certain student as in charge. But if I want to do it I have	activity setting hindering self-determined and extrinsic motivation	environmental factors hindering self-determined and extrinsic

in charge. But if I want to do it I have no chance. If I had the chance, I would try my best to get it, even if it was just a small chance. I would love to do that and I want to lead other students and work together.	no chance.		motivation
I think that academic study at university is the most important thing and is also the ultimate goal for students. Apart from that, I think the university should provide more opportunities for internships which help students get an idea of how things work in society. Though there are some opportunities organized by the school, they have no practical effect. They are hard to practice on my own. The students want to go to off campus for part-time jobs and they always depend on an agency to help them find a job. But most of the agencies are not professional and they just charge an agency fee but give the students very little in return. So the students are frustrated. I went to a company directly to have an interview and it was well organized and professional. It payed me for the hours I worked and if I did a good	1: I think the university should provide more opportunities for internships which help students get an idea of how things work in society; 2: Though there are some opportunities organized by the school, they have no practical effect.	1: expectation of the university environment in terms of providing internship opportunity; 2: activity setting hindering self-determined and extrinsic motivation	1: expectation 2: environmental factors hindering self-determined and extrinsic motivation

<p>job I got a bonus. I did not work very long but I felt good. It is really hard to find a job off campus so students mostly depend on agencies.</p>			
<p>Maybe when people meet me for the first time they might not think I am a competent or capable person. I am not so confident. There are also some people who seem competent when they speak but in practice their competence is weak and they are not as capable as they lead others to believe. I am not that kind of person. I show my competence by doing work. By the end of a task, I can also talk a lot. I can really do something I think. At university I think there is still a gap between the self and society. For example, the pressure at school is less than in the society and it is not so competitive. The relationships among students are simpler because they do not need to compete for profits. When we go into society I think there will be something related to personal profits. I thought about this and I think maybe it will change naturally and gradually. I just want to keep</p>	<p>At university I think there is still a gap between the self and society.</p>	<p>There is difference between the university perceived and the one expected</p>	

myself in a good mental place and do what I need to do.			
<p>My home is in Henan province. The weather in Henan is similar to that in Tianjin so in terms of adapting to life here, it has been easy. Moreover, I have been living in a dormitory since middle school. I am the eldest child in my family so I am independent and I do not miss my home very much. Now the students in my dormitory are all nice and we get along with each other. We understand and help each other. The biggest challenge is that I want to widen the scope of my thinking and I want to see more and experience more. For example, I did not use the computer very often before I came to university and did not know what “Powerpoint” was. The teacher asked us to do a piece of “Powerpoint” work. I did not know how to do it and the teacher did not know I lacked this kind of knowledge and ability. I realized I had to learn and make an effort in this kind of thing, which was new to me. The challenge is in learning the new things.</p>	<p>I want to widen the scope of my thinking and I want to see more and experience more.</p>	<p>the expression of integrated goals</p>	<p>the expression of integrated goals</p>

Example 2 Chinese Transcription

S5 学生

性别：女

年级：大二

访问时间：2009 年 5 月 19 日

访问地点：宿舍楼后小花园

问：就是说现在大二，就你两年在学校的经历，你对学校的那些事情会比较感兴趣呢？特别愿意参与进去的？

答：我觉得比如说，平时学校，系里阿，或者是一些社团组织的一些志愿者活动，就好多同学都比较热心，我也是。然后就是一些比较实际的一些科研项目什么的。虽然有的时候能力达不到，但是愿意参与，因为毕竟搞那些科研可以提高学生的自主学习能力，还有就是科研能力。这些就是我们比较关心的，而且都愿意参加和提高自己的能力。比如说学校有开一些讲座什么的，也愿意去参加。能够提高自己学习能力啊，人际交往能力的活动我都愿意去参加。

问：那么这些活动参加下来之后，感觉怎么样呢？

答：说实话，在我们学校水平有限，有时候效果不是特别好。但是有的对于我们来说还是有比较实际的作用的。比如说我在大一的时候，参加了学校的青年志愿者协会，那就会参加他们的一些志愿者活动，比如去小学，他们是跟天津市的一个志愿者团体有联系的，组织规模就比较大，而且就是感觉实际的效用比较大，那就感觉效果特别好，而且收益也比较大。那时候是去了一次实验小学，我们宿舍是准备了一个小节目，我们就表演给那里的孩子们和老师看，因为那里的学生有的家庭比较贫困。我们就和他们一起做游戏阿，表演节目，给他们捐赠了一些书。和他们交流的时候就感到他们愿意参与，愿意交流，我们虽然说累了一天，但是感觉心里面特别高兴。

问：那你对学校的那些事情是你不乐意去做的，不感兴趣的呢？

答：学习上的吧，好些课，学生没什么兴趣。老师教的时候，我们不知道他教这门课是为了什么，我们也不知道今后是不是会用到它，用来干什么。还有就是和其他课程联系不到一起，现实生活也用不上，好像大家都不愿意去上。

问：比如说哪些课呢？

答：比如说，就我个人而言，如果说我对计算机不感兴趣的话，比如一些编程方面的东西我真的不愿意学。编程方面的东西要求思维很活跃，而且要求逻辑思维特别强。如果说这方面能力达不到的话，应付出这方面努力的话，直接效应不大，也浪费了这部分时间。那我可以把这部分时间用在其他感兴趣的地方，然后自己再多学一些其他的東西，提高一下其他方面

的能力，那样我觉得效益会更好。

问：但是毕竟是专业课程，你是必须去考核的，你还是要付出，还是要花时间和精力在上面，这个时候你是怎么看待这个事情的呢？

答：我觉得这可能就是出于这种情况的限制，不得不就是为了期末的考试，平时还是要付出一些，虽然说要达到很高的水平很难，但是如果说期末考试要通过那个不错的成绩，还没那么难。所以我还是愿意分配一些时间在上面，自己比如说在电脑上看看老师的幻灯片，老师布置的作业做一下。课程中比较难的地方，还是会好好复习一下。毕竟在平时稍微付出一下，在期末考试中就不会那么困难了。

问：就是说是完全为了一个考试在那里？

答：也还行吧。刚才说可能逻辑思维能力，智商没那么高，但是我还是愿意学。毕竟老师教了，也还是在上面花时间了，就想达到一个比较好的效果。虽然现在不知道以后会有什么用，但是还是尽量多学一点，万一以后有用的话，也会有一种心理安慰。

问：那老师会跟你们聊一聊说学这门课的作用在那里，比如说上数据库的老师，他会给你们说这个东西是干嘛的，以后会在什么情况下用之类的吗？那么如果有的话，你们听了老师的话之后会更加乐意接受一点，有这种情况的时候吗？

答：有。像我们学数据库的时候，老师刚开始的时候就会告诉我们今后毕业设计的时候就会用到很多的资料啊数据阿什么的，自己要注意保存，以后方便用。大部分学生还是会好好学，毕竟老师的逻辑思维特别强，讲得也比较有条理，每个单元结束了会给我们做一些题阿什么的，给我们一定的锻炼，强化一下我们的知识点，那样的话学起来也没那么难。如果说老师跟我们强调了学这个有什么用的话，我和我的很多同学都是很愿意去学的。但是还有一部分时不愿意学的，就是等期末的时候再突击一下，他们是完全没兴趣。像我是没那么极端，差不多，兴趣不大还是可以付出一些的。

问：那么在你克服这些困难的过程中，你有没有感觉到老师对你们的一些理解吗？比如说老师会说大家一起克服困难还是说有那么难吗？努力一下就行。

答：我是我们班学习委员嘛，那有的时候和老师沟通比较多一些。比如这次数据库的学习，我们班有几个确实不太感兴趣，有时候就会缺课。老师管的也比较严，所以经常会跟我说让我跟这几位同学说一下，如果他们再不来的话，就怎么样怎么样。跟老师交流的时候，老师就会说，他们为什么不来呢？搞不懂嘛。我只能说，他们可能确实没有兴趣。老师就会说那以后还是可能会用到这部分知识的，我就只能说我尽量跟他们说吧。老师也觉得，如果确实没什么兴趣的话，硬逼着来，也没什么效果。老师也理解，他们也说咱们系开这些课就是从大多数同学的角度上来考虑的，但是个别同学不愿意学，接受不了，也可以理解，但是有时候学校的硬规定什么的，老师也无奈。老师也可以理解。还有像概率课，概率课是公共课，这个校区的话只有我们系学。所以这个学校的大环境是学语言的，是学文的，刚大一的时候，学高等数学，自习的时候有的时候还看看高数，后来人家就觉得自习室里面看高数好奇怪的

一件事情。后来我们慢慢就是作业做一下，稍微看一下书，也没有花那么多的时间在上面，期末考试的时候也不是很难，可以应付，对自己在这方面的要求也没那么高了。我们系的学生都是学理科的，以前学数学压力比较大，现在要求没那么高了，环境也不是那么允许（没有很好的一个理科学习氛围）。

问：除了学习这一块之外，其他方面有没有自己不太愿意去的呢？

答：也有。比如说学校里面形式性的搞一些什么活动阿什么的，他派到系里面有多少名额，系里面又分给班里多少名额，必须得去，你必须凑够这个名额。人家来做讲座拉，不能下面没观众阿，效果也不好。有时候就是班里采取一个办法，就是你去一次，给你记一次，期末的时候给你加点分。但是还是没人去。

问：都是些什么讲座阿？为什么同学不愿意去？

答：其实就是一些别人讲党课，政治什么的，好多同学不感兴趣。

问：和老师沟通这方面的情况怎么样呢？

答：我们系毕竟人少，老师也愿意和我们沟通。只要是我们去问什么，老师都会很热心的。

问：和同学的交流呢？

答：那就挺多的。因为住在一起。我吧，性格没有那么的外向，但是也不算保守内向的，也能说得来，跟我们班同学交流的也算挺多的。

问：在学校这个环境里面，你是怎么看待你自己的呢？你是给自己怎么定位的？或者说大学四年，你想成为一个什么样的人？

答：我觉得，在大学里面，我原来定的目标就是说在大学里面虽然学教育技术学，但是进了外院，还是想多学一门语言，毕竟有这个语言环境。但是大一下半学期，学了一门德语和韩语，就是说有点应付不过来。但是那个学期特别忙，一星期周一到周五晚自习都有课，但是到后来就觉得很充实，虽然收获不是很大，有点忙不过来。虽然那两门语言没有坚持下来，以后再捡一下吧。在大学里面我希望我可以成为一个比较独立，又很强的交际能力，自己的工作能力比较强的人。因为我在我们系外联部工作，刚开始的时候觉得有点难，后来我通过参加几次兼职，在外面的经历之后，我觉得我还是特别愿意跟别人打交道吧。当时卖手机的时候，自己的工作也得到了那些领导的肯定。我觉得干那方面的工作还是挺感兴趣的。那么在大学四年里面还是培养一下自己的交际能力。我希望以后出去可以干一些销售阿，教育阿什么的工作，

问：那么也就是说一个是独立性，交际能力，领导能力，你觉得这三方面在学校里面得到到培养吗？或者说想去做什么的时候，学校可以提供一些什么帮助吗？

答：我觉得学校里面有一定的限制。比如说搞一个科研什么的时候，老师就任命了谁来负责，但是可能自己想去做的时候就没有这个机会。但是有机会的话，我会努力去抓住吧，哪怕就

目前来说就是一些小事，我还是愿意参与，起到一个领导的作用，带着大家一起往前走。

问：交际方面呢？学校会给你与人交流的机会吗？

答：那就是和任课老师吧，还行。

问：那么从个人发展角度上来讲，不管是对于将来职业的发展还是自身能力素质的培养，你觉得学校这个环境最应该给你提供的是什么？

答：我觉得学校里面虽然最终的还是学习，但是我觉得学校还是应该给学生提供一些走向社会，去做一些力所能及的工作，多一些实习的机会。虽然说咱们系里面学校里面有组织的实习，但是挺形式的，没有什么实际的效果。不能让我们真正的实践自己。平时同学大家也想自己去找一些兼职的工作来做，但是很多帮你找工作的中介，有的时候并不是出于好意，有的还收取一些中介费，但是又不是很正规，自己赚一些钱，好多同学出去之后比较受挫。我的话，是直接到天津通讯公司面的试，公司就挺大挺正规的，而且按时发工资，工作得好，还会加工资。虽然时间不长，但是感觉还行。自己出去找工作真的不好找，只能找中介。

问：你觉得自己是有竞争力的人吗？

答：我觉得我可能是那种吧，别人第一面见我的时候，看不出来我有多么有能力，可能有的人就是很会说，说的时候铿锵有力，但是做的时候就弱一些，但是我不是那样的人，我觉得我自己是慢慢的通过工作，展现自己能力的人，到了后面，说我也很能说，但是不像别人说的那么好。但是办事情的时候我是能做的。在学校里面，我觉得和社会上还是有差距吧，毕竟在学校里面压力还是小的多，然后竞争力也体现不出来，同学之间也比较纯洁。那么走进社会之后，会多很多功利性的东西吧。但是也想过，但是可能以后走向社会了，会慢慢变的。但是我觉得我还是保持和学校的状态差不多吧，保持一颗平常心，踏实一点，做好自己的事情。

问：你回忆一下你刚进大一的时候，你觉得自己在适应学校环境面临的最大的挑战在那里？

答：我家在河南。我觉得适应环境方面，我们家河南和天津气候方面什么的差别不大，生活方面不需要适应。主要就是开拓自己的思维，多见一些世面。我那时候大学之前没摸过什么电脑，不知道什么是幻灯片，然后老师就要求我们去做。就不会做，老师也没想到我们这方面能力这么差，反正后来就是慢慢在努力吧。对我来说，对一些比较新的东西方面，挑战比较大一点。我之前从初一开始住校，我又是我们家老大，独立性还是比较强的，也不是特别恋家。我们宿舍的同学都比较和谐，大家相处的都挺好的。大家要懂得包容和理解。大家也有个相互的照应，挺好的。

Example 3:

Fo6, Female

Interview date: 16/05/09

Interview Venue: Garden behind the student dormitory

Data Extract	Coded for	Sub-theme	Theme
Life at university is definitely different to life at high school. There are lots of extra-curricular activities, such as sports, arts and so on. They are organized by us rather than by the teachers like they were in high school. The activities are student activities, presented and performed by students and with students participating in them. The atmosphere is quite good and I have gained a lot of experience through this. It is a kind of accumulation of experience to prepare me for jobs in the future. I am interested in the activities because they are organized by us, the students.	1: The activities are organized by students rather than by the teachers as in the high school... The atmosphere is quite good; 2: The atmosphere is quite good and I have gained a lot of experience through this.	1: identified regulation; 2: positive consequences	1: internalization; 2: consequences
I am quite interested in the computer science courses. I think I can apply this kind of knowledge to my life. If I can make some functions come true it is such a feeling of success. I feel I am better than others on this aspect that I understand something but it	1: I think I can apply this kind of knowledge to my life; 2: If I can make some functions come true it is such a feeling of success. I feel I am better than others on this aspect that I understand something	1: identified regulation; 2: introjected regulation	internalization

seems that others does not.	but it seems that others dose not.		
I care about the suggestions and courage I get from teachers because they provide a kind of confirmation of what I have done. There is competition among students. That is to say if one of the students understands something I am supposed to understand it, even though I am not interested in it. If people around me understand it, I feel I have to understand, I really have this kind of feeling. The teacher always encourages me and does not judge me. If I want to learn more and new things these are the two reasons (interesting; compete with others).	There is competition among students...if one of the students understands something I am supposed to understand it, even though I am not interested in it.	introjected regulation (want to compete with others)	internalization
I am not interested in but I have to learn or I will fail the exam. For example, The general selective courses (electives), such as history and politics, test students by requiring them to recite knowledge which makes the students feel that it lacks significance... I do not think it is worthwhile and I forgot what I had learnt about the history of computer development after I took the exam. I hate doing something that I know lacks meaning.	1: I am not interested in but I have to learn or I will fail the exam. 2: The general selective courses (electives), such as history and politics, test students by requiring them to recite knowledge which makes the students feel that it lacks significance	1: external regulation; 2: ways of assessment hindering self-determined and extrinsic motivation	1: internalization; 2: environmental factors hindering self-determined and extrinsic motivation

<p>The teacher definitely tells us the significance of doing it, and he/ she encourages us that the knowledge will be applied in the future. I am not interested in this aspect knowledge learning and I am not sure that I will do that kind of job in the future so I do not want to learn seriously. Then I realize that it does not say I will do this kind of job in the future but the knowledge are related with each other. I should have learnt it now it is a little regret.</p>	<p>1: I am not sure that I will do that kind of job in the future so I do not want to learn seriously. 2: I should have learnt it now it is a little regret.</p>	<p>1: expression of integrated goals of studying this course; 2: negative consequence</p>	<p>1: expression of integrated goal; 2: consequence</p>
<p>I think the teachers understand me. I think only some students feel depressed about learning not all students. The teachers encourages rather than persuade me to learn. I still get some passion from my teachers' words by understanding the significance of learning something. I would like to have a try at least. I think they are patient with us students and they would like to offer me help.</p>	<p>I still get some passion from my teachers' words by understanding the significance of learning something. I would like to have a try at least.</p>	<p>teachers' encouragement supporting self-determined and extrinsic motivation</p>	<p>environmental factors supporting self-determined and extrinsic motivation</p>
<p>Life at university is different from in high school in that the teachers do not supervise us as strictly. I live with my classmates and we do not have classes all the time. I mostly manage my own time. Nobody is perfect here and everyone's</p>	<p>(The situation of studying and living at university; how this undergraduate perceives himself)</p>		

got weaknesses. I am just another person. I do not want to be behind them, I just want to go on with them. But I still have my own thoughts. It is good to be like this at university. I do not want to stand out and be envied by others. On the other hand, I do not want to get behind my classmates, and feel disappointment.			
I am quite interested in the fields of economy and business (I may develop my future career in these fields). Knowledge of these fields is not required in terms of subject learning in the department of Educational Technology. I read books on these topics at home and also look for relevant things to read in the library.	1: I am quite interested in the fields of economy and business; 2: I read books on these topics at home and also look for relevant things to read in the library.. 3: I can manage time to do that.	1: expressions of integrated goals; 2: library stock supporting self-determined and extrinsic motivation; 3: personal ability of managing time supporting self-determined and extrinsic motivation	1: expressions of integrated goals; 2: environmental factors supporting self-determined and extrinsic motivation; 3: internal factors supporting self-determined and extrinsic motivation
There is still a distance between what is and what I expected. In general, after four years experience in the university I feel I am grown up, I have been changed actually and I think I can adapt to the society. I think I am competent.		the consequences of growing up gradually while at university.	
There are obligatory courses for students but I think the university should provide more courses which cater to	1: I think the university should provide more courses which cater to students' needs;	1: expectation of the university environment; 3: activity setting	1: expectation of the university environment; 3: environmental

<p>students' needs. There are electives but the choices isn't great. On the other hand, there could be more opportunities to take part in the performing arts. That is to say the things which can cultivate students' tastes or enhance their personal development are few. This is a foreign studies university, and has the atmosphere of one, but there aren't many opportunities to know about abroad. I am in my final year and I will go enter society very soon. The university does some things to help students prepare for entering society. For example, there are job fairs and lectures organized by the university. Some industry experts are invited to give students talks and they introduced me to what it is like to work in society. They shared that with us. The university does a lot for us in that aspect.</p>	<p>2: That is to say the things which can cultivate students' tastes or enhance their personal development are few; 3: I am in my final year and I will enter society very soon. The university does some things to help students prepare for entering society (job fairs or lectures).</p>	<p>supporting undergraduates' self-determined and extrinsic motivation.</p>	<p>factors supporting self-determined and extrinsic motivation.</p>
<p>My home is in Tianjin. The biggest challenge to me was transferring from life in high school to university. The restrictions placed on us by teachers in high school were really strict. When I arrived at university there was no one keeping an eye on me suddenly. The difference was</p>	<p>(the experience of adjusting to the university environment)</p>		

<p>too big to get used to. It was easy to get lost and relax all the time. I have to learn how to manage my time including finding the time for having a life and studying. My parents and my school cannot always supervise me. I have to depend on myself. It was my biggest challenge, more so than adjusting to the studying. Now I am still at school and my parents are sometimes still in charge of me. These four years at university are the period for me to prepare to enter society. I am on campus and the consequences of making mistakes during this process of preparing to enter society are not too bad if I do something wrong during the process of preparing to enter society.</p>			
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Example 3 Chinese Transcription

Fo6 学生

性别：男

年级：大四

访问时间：2009 年 5 月 16 日

访问地点：宿舍楼后小花园

问：大学四年你觉得你对学校的哪些事情特别感兴趣？社团活动也好，学习上的也好？

答：总体感觉大学的生活跟中学肯定是不一样的。它有好多课外生活，特别丰富。有文艺，体育方面。不会像以前都是老师主持，现在全部都是学生自己主持，自己举办，学生自己参与。这些活动的氛围特别好，给我们积累的经验特别的丰富，为以后工作能积累不少经验。

问：所以说你参加这样的活动其实原因挺多的，首先是感兴趣嘛

答：因为让学生自己来参与，一起来举办主持这些学生自己的活动，学生都很乐意去参加。

问：那学习上你有没有对你的学科，或者是某一件什么东西特别感兴趣？

答：当然有了。像我们学教育技术嘛，肯定会对网络啊计算机啊有兴趣。还有因为现在计算机特别多嘛，可以通过自己学到的东西用在现实生活当中。然后学完东西，能成功，能有一种成就感，感觉别人没有的能力你能有。

问：当你在获得成就感以后，你觉得老师会赞扬你，觉得你做到这一步挺牛的，你会在乎这种东西吗？

答：当然会在乎。因为这是对你自己成绩的一种肯定。然后同学之前很可能会进行竞争，就是你懂，我也要懂，又好像这件事你并不感兴趣，但是因为周围人都懂，觉得你必须要懂，有这样的心理。老师当然是一直在鼓励你，不会说你不好，只会鼓励你学会更多，掌握更多东西，就是有一种自己喜欢的在里面，又有一种是不能低于别人的心理在里面，就是让你可能会去学更多东西吧。

问：那这些是感兴趣的，那么不感兴趣的呢？

答：不感兴趣的就是你是不去学的话，就考不过去了。就还是出于有种考试的心理在里面，你不学的话过不去，你还是得去学那些东西。

问：有没有具体一点的，对哪个学科啊，做哪件事啊特别不乐意？

答：你看像一些公共课吧，讲课也不认真听，最后等勾范围然后拿去背。就像以前高中那会学的什么政治，历史，就那样死记硬背，就是挺无聊，挺浪费时间的。其实都不是特别愿意去学的，但是为了考试应付吧，挺没意义的感觉。

问：但是考试这种东西就是，即使不愿意，但是都还是得弄，这种情况下，你跟老师沟通多吗？因为有些东西，你不知道它的意义在哪里，老师会跟你说学这有什么好处。

答：老师他肯定会说。因为这些东西以后会用到，但是应当时学习的心理就是，我对这些东西实在是不感兴趣，感觉这些东西以后生活中接触不到。再加上，实在是不感兴趣，就老是不学，但是其实虽然学好了不一定跟以后生活有什么连接，可是多多少少会有一些关系，以后感觉确实是没什么，但也应该去认真听，也有点后悔吧。

问：嗯。学生多多少少会表现出不乐意嘛。你觉得老师他会去理解你，然后给你讲，就算你觉得无聊，也应该去听。

答：对，老师理解。有一部分学生肯定会带有这样的情绪在里面，肯定不是大部分。老师当然会理解，然后老师会以鼓励你，谈不上是劝说，还是会激发你对这门学科的学习激情，让你知道学这科的好处啊，对以后有什么用什么。

问：你之前觉得没什么用，但是一旦听到老师这样说，就会觉得我应该试一下？

答：对对对。

问：那就是说平时跟老师这方面的沟通还是挺多的？

答：嗯，老师还是比较耐心的去跟学生谈这样一些话题，和他们沟通。

问：老师会去帮你？

答：对对

问：在学校这个环境里面，你怎么看待你自己，怎么给自己定位？

答：毕竟大学跟中学不一样。老师不再管得那么严了，希望同学们住在一起，上课时间也比较宽松，时间大部分还是自己来把握。大家同学当然也会有各自的缺点，还有就是别落后其他同学。跟着同学走，然后有自己的想法，我觉得在大学里面这样就挺好的，不会做太突出让别人嫉妒，也不会太落后觉得失落。

问：你很中立啊，那么你觉得有自己特别喜欢特别在意的事，这样的事对你来说重要吗？

如果这件事我特别喜欢做，但又做不了，会感觉特别郁闷吗？

答：会有，我会努力去做我想做的事。

问：学习上有没有特别喜欢的，但是又不是专业课？

答：有。就是会私底下学。我挺喜欢搞贸易和经济这一块，我会私底下在家看很多这方面的书，然后在图书馆。

问：你觉得在图书馆看书够吗？

答：我感觉可以。肯定是课上老师不会讲到得东西，就因为兴趣在这，就有了动力，就会多去读一些有关经济方面的书。还有就是在网络上比较关注这方面的信息。

问：还是有这样的时间和机会去做哈？

答：有，有

问：你感觉你在学校里面是个特亲近的人吗？

答：我感觉我还是算比较能够跟其他同学或朋友相处，不会有太多隔阂。

问：你挺愿意跟别人相处的是吧？

答：对对，就是挺愿意在大学里面跟其他同学接触相处，关系处得还是很不错。

问：行。那现在大学快毕业了，你的工作啊学习啊，你觉得达到你自己的预先要求了吗？你觉得你自己够有竞争力吗？对自己有信心吗？

答：当然比入学时的预期想法差点，但是总体感觉就是经历了三年大学生活，我自己就是确实在成熟，在变化，越来越适应这个社会。进入社会，还是有点竞争力的吧。

问：那不错。那就是说，因为你在上大学之前，对大学环境有一种向往。现在经历了4年之后，从个人发展方面来讲，不管是职业上的帮助还是个人素质能力上的提高，你觉得学校最最应该为你们提供什么样的环境？

答：你是说应该再提供，还是…？

问：你想要，却没得到的。

答：虽然外院有自己固定的课程，但是学校还是应该结合同学们的兴趣，可以另加一些课，虽然有选修课，但是…。

问：选择太少是不是？

答：对对。还有就是，学校应该组织一些文艺活动等，陶冶情操的东西实在太少了。还有就是外院可以引进一些国外的东西，但是都太少，就是应该添加一些同学们更喜欢的东西，一些科目啊。

问：我觉得大学应该是为你进入社会做的准备。就是从这个角度上来说，你觉得做好这些需要做出什么事？接触社会啊？学校会给你这方面的帮助并且提供这方面的信息吗？

答：学校就是会提供。因为我们现在大四了嘛，学校早就引入什么企业啊什么的，还有就是招聘啊演讲啊，或是找什么专家讲一些职场的经验，然后还有社会上的一些工作的经验，一些成功人士的心得。学校为我们做了不少事情。

问：觉得做得还是不错？那回想一下大一的时候，你是天津市里的吗？

答：对

问：你觉得你适应大学环境吗？当时你最大的挑战在哪里？因为你不像外地同学离家那么远。

答：其实最大的挑战还是在于，高中时期老师对你的约束是非常严的，但是到了大学突然变得没人管了，就是这个落差太大，很容易堕落，要把握不好就会堕落。大学一入学就要学会把握自己的时间，包括日常生活。家长也不怎么管你了，学校也不管你，什么都要自己来，这应该就是我大一时最大的挑战吧，而不是学习。

问：那现在你觉得你这方面的能力还不错吗？就是自己能管住自己。

答：因为我觉得步入社会，家长还是会管你。并且都毕业了，学校肯定没有什么学可上了，大学确实就是你步入社会的一个准备期，思想期吧。

问：大学让你学会自己照顾好自己吧？把自己的生活学习安排好，就是这种能力。

答：对，其实大学就是一个不用你付出太大代价锻炼的一个阶段吧

问：这就是我说的一种自我决策能力。自己能够为自己决定一切东西，而不是说家长让我干什么我就干什么，老师让我干什么我就干什么。而是我自己知道我想要什么，这是一个慢慢锻炼的过程，所以你在大学里面还是有这样的锻炼，自我成熟？

答：对对。

Appendix E: Consent Form

Research Title:

Basic Psychological Needs, the Mediators for Motivations in a Chinese University

Can you discuss this research with the interviewer? Yes/ No

Are you provided with enough information about this research? Yes / No

Do you agree to participate in this research interview? Yes/No

Do you agree that this interview conversation is recorded by the interviewer?

Yes/ No

Are you informed that this interview conversation will be used only for academic research and will not be open to others except you and the interviewer?

Yes/ No

Do you agree that this interview conversation will be used only for academic research?

Yes/ No

Do you know you can withdraw this interview? Yes/ No

1) at any time;

2) without any reason;

3) withdraw this interview will not harm your life in the university

Consent Form (Chinese Version)

研究题目:

基本心理需求对行为动机的调节影响

你可以就这项研究问问题并进行讨论吗?

可以/ 不可以

对于这项研究, 你能得到足够的相关信息吗?

能 / 不能

你同意参与这项研究吗?

同意/不同意

你同意访问者在访问的同时将你和访问者之间所进行的谈话内容录下来吗?

同意/ 不同意

你被告知所录下来的谈话内容只限于研究使用范畴而不会对访问者之外的任何人或是任何机构公开了吗?

已被告知/ 未被告知

你同意所录下来的谈话内容仅限于研究使用范畴吗?

同意/ 不同意

你知道你有拒绝参加这项研究的权利吗?

1) 在任何时候

2) 无需任何理由

3) 并且不会影响到你在学校的其他方面

知道/ 不知道

班级:

签名..... 时间.....

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